

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL
RAILROAD AND FINANCIAL NEWSPAPER.

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Holton Iron Roofing Co.
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(See Woodworking Machinery.)
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Fulton Iron & Eng. Wks.
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Globe Machine Wks.
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Pancoast & Maule.
Standard Tool Co.
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- Ventilators.**
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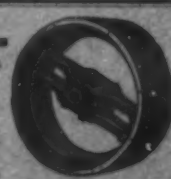
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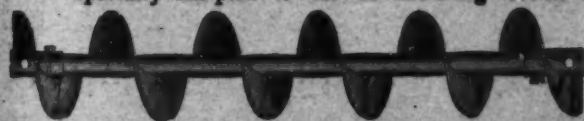
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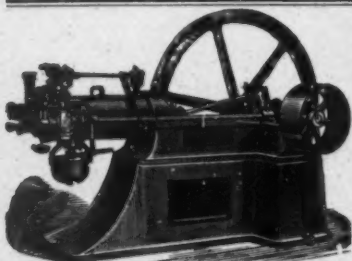
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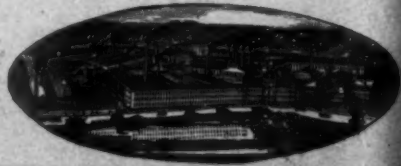
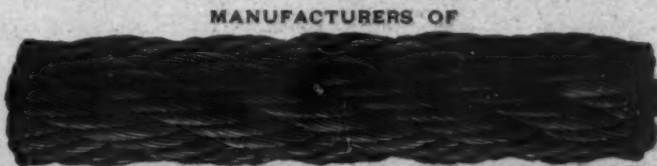
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MANUFACTURERS' RECORD

A Southern Industrial, Railroad and Financial Newspaper.

VOL. XVI. No. 21.
WEEKLY.

BALTIMORE, DECEMBER 28, 1889.

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Manufacturers' Record.

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BALTIMORE, DECEMBER 28, 1889.

The Death of Mr. Grady.

In the death of Mr. Henry W. Grady the South loses an advocate and friend that it can ill afford to lose at this time. He was at the zenith of his power and usefulness, and the present is just the time when the South needs such rare qualities as he possessed.

The South, rich in institutions and resources, is meagerly understood at the North. She seeks advancement and development, but these cannot be had without external sympathetic support. In the present stage of civilization no nation can stand alone. It must, in some degree, be dependent upon other nations and people. Mr. Grady keenly felt this need of the South, and was endowed with rare powers of eloquence and diction in making it known to the world. He had a delicate and graceful way of expressing deep convictions. Few men have placed the Southern situation before the North with the skill that Mr. Grady has, and by his eloquent and picturesque addresses, has greatly aided the development of the South industrially, politically and socially.

His death is particularly sad, coming as it did in the prime of his manhood, and at the time when the South is on the threshold of the greatest, best and most completely rounded development of any people in the history of the world. But he passed away a prophet, highly honored in his own country and with a clear glimpse of the coming Great South which his wonderful genius helped to make possible.

Agriculture Aided by Pyrites.

The following choice paragraph recently appeared in the Oil, Paint and Drug Reporter, a trade paper of considerable circulation and influence, and the whilom champion of the Cotton-Seed Oil Trust:

A systematic effort is being made to induce acid manufacturers to locate in North and South Carolina. According to the reports coming this way the two States must have a foundation of pyrites, which crop out on the surface anywhere. Some accounts of the "remarkable" discoveries will be found in our reading columns. We are told that acid chambers are being erected in several places, and a mint of money is stored in the bowels of the earth ready to be developed. This is one way of booming small and comparatively unknown towns, or of converting a desert waste into city lots of less prospective value. The programme of the Southern boomers is changed periodically to suit the emergencies of the case. When they have exhausted the money and patience of those in the paint line by alluring pictures of prosperity the oil trade is experimented with, and soon from one commercial branch to the other, until the acid makers have been considered good fish to bait for, and special correspondence is forthwith prepared for publication in contemporaries to pave the way for a grand haul in real estate profits.

We do not know that there is a brimstone trust, but reading the foregoing between the lines it looks suspiciously like it. We do know, however, that there is an increasingly heavy importation of brimstone to meet the needs of the phosphate manipulators, who depend mainly upon that article for the production of their sulphuric acid. Because of that the MANUFACTURERS' RECORD has recently ascertained and published "unvarnished facts" showing that the chamber acid used could be made from pyrites at a considerable less cost than it could from brimstone, and that there were in many parts of the South inexhaustible deposits of this class of ores.

These statements of "unvarnished facts" have been widely read, and have given rise to active investigations by many persons. That out of them will eventuate the building and operating of many acidulated phosphate factories in the interior of

most, if not all, the cotton States there is every reason to believe. Cotton planters must have this fertilizer, and the less it costs the better. The wide diffusion of pyrites in the South affords the opportunity to accomplish the cheapening of this essential of agriculture in every State, because it costs far less to carry the untreated rock to the acid than the acid to the rock. Moreover, when the acidulated rock is prepared in the center of an agricultural district, the farmers of that region have no extra railroad freights to pay. Instead therefore of this being "one way of booming small and comparatively unknown towns, or of converting a desert waste into city lots of less prospective value," it is a proposition to utilize nature's abundant gifts for the benefit of general agriculture. Our brimstone contemporary further says:

The Southern States are certainly showing indications of industrial progress, and the residents are to be applauded for their active efforts to improve the condition of affairs, but they should be careful not to allow irresponsible speculators to ruin the prospects by practicing sharp games on Northern investors, who want the unvarnished facts. It will also be necessary for the latter to exercise good judgment in accepting or rejecting the many reports emanating from that source, and not to depend on the statements of land companies without having them personally verified. There is little doubt but what great opportunities await the development of the Southern territory, and careful inquiry ought to repay any one who is at all interested in the matter.

The Southern States, thus condescendingly referred to, will doubtless appreciate both this approbation and the advice accompanying it, and the "Northern investors" have already proved that they could "exercise good judgment" in the South as well as at home. Meanwhile it may relieve the anxiety of the Oil, Paint and Drug Reporter to know that the utilization of pyrites for the production of sulphuric acid has been done for a long time at the immense works of the Baldwin Fertilizer Co. at Port Royal, S. C., who have found it much more to their profit to buy pyrites in Virginia and pay freights

from there to Port Royal than to import foreign brimstone for the same purpose.

How important this Southern fertilizer business is to the railroads is indicated by a pamphlet of 32 pages issued the 20th inst. by the Associated Railways of Virginia and the Carolinas, in which are given the prices per ton for fertilizers in carloads of 20,000 pounds minimum, from the seaboard cities to every station of their extensive and complicated system. And the immense traffic that makes such a pamphlet essential to its quick and accurate handling shows that commercial fertilizers, in which acidulated rock takes the lead, are used on every Southern farm.

Improved farms, and not land speculations, are to be aided by the development of the pyrite-acid industry.

MR. F. L. STRONG, secretary of the Hercules Iron Works, of Chicago, builders of heavy machinery, ice machinery, &c., under date of December 18 writes:

Mr. MacDonald, the founder of this company, and the inventor of the "Hercules" ice-making machinery, who has traveled many thousands of miles in the South during the past three years, says that he always finds your paper wherever he goes, and solely upon the results of such observation we have cut off all advertisements in other Southern papers, and intend in the future to use your paper only as our medium.

THE Standard Dynamite Co., of Chattanooga, Tenn., write us that they "may need an agitator soon." We imagine that an "agitator" can be very easily secured. A slight blow judiciously applied would prove a very powerful "agitator" for their factory and for the neighborhood. This would be a good place for some of the socialistic or anarchistic "agitators," and possibly to use them for this purpose would greatly quiet their "agitating" proclivities. We hope the Standard Company can utilize a few of them in this way.

Subscribe to the MANUFACTURERS' RECORD.

Fall River Finds Conviction.

When Fall River was seized with the fever of building more cotton mills a year ago or so, among the organizations last in the field seeking subscriptions was the Glen Mill. The stock was soon taken, but when the first assessment on the stock was called for, no response was made, nor have any steps been taken up to this time to begin work on the mill. The promoters of the scheme say the mill will be built in the spring, but an inside rumor has it that some of the capitalists interested in the scheme will put their money into a Southern venture instead.

Let the ultimate results in this case be what they may, the significant fact still remains that the phenomenal success of cotton manufacturing in the South has so impressed would-be investors in mill stocks in Fall River as to deter them from building another mill and set them to considering investing in the South instead. Fall River is the leading cotton manufacturing center in the country, and its mills are among the most successfully and economically run in the North. The fact then that the success of cotton manufacturing in the South has called a halt in this great center, even though the halt be perhaps temporary, shows that it will not be very long before Fall River money will actually come South in this industry. A few years ago Fall River said the South could not make cotton cloth to compete with the North. Now the city has found conviction. The next step, most naturally, will be to go South. The 53,000-spindle mill at Florence, Ala., to be built largely by New England capital, is a poser for Northern cotton mills, and is only a forerunner of other large mills to be established, besides the 25,000-spindle mill already decided upon at Denison, Texas, likewise by New England capitalists.

THE annual report of the Comptroller General of Texas makes an interesting exhibit of the material progress of the Lone Star State. A summary of the report shows: Total taxable values, \$729,175,564; increase over last year, \$48,090,660; railroads increased 251 miles and \$3,250,000 in value; horses and mules increased 92,000 and \$200,000 in value; cattle decreased 287,000 in number and increased \$1,300,000 in value; telegraph lines increased 1,016 miles and \$21,000 in value; sheep increased 700,000 in number and decreased \$26,000 in value; hogs increased 150,000 in number and \$500,000 in value. The greatest increase in value is in lands and city property. The manufacturing interests of the State, too, are increasing rapidly, and numerous very extensive concerns have been established or contracted for at Dallas, Denison, Fort Worth, Laredo and other points. In fact, there is scarcely a town in Texas that is not on the lookout for and ready to offer inducements to secure factories of various kinds.

FORT PAYNE does not propose to be left behind in the movement now so general for building steel works in the South. The MANUFACTURERS' RECORD has already mentioned that contracts had been let by the Fort Payne Rolling Mill Co. for the erection of basic works, and now the same company has ordered from one of the leading machinery builders of Pittsburgh a complete steel blooming mill of the most modern equipment. The order also includes a nail plate train, a bar train, &c. The manufacturers of the machinery say that "this is probably the largest amount of rolling mill machinery yet ordered from the South in any one contract, but is no doubt only the beginning of such expenditures in the near future for the manufacture of steel." Fort Payne is to be congratulated in having taken the lead, as it is likely that this will be the first steel plant of this character in operation in the South, though several other towns are pushing along very lively in the same good line. The few people who were very free in predictions of a failure when Fort Payne was projected, have doubtless ere this suffered many a pang that they were not among the fortunate early investors in that prosperous and progressive place.

THE American Manufacturer, of Pittsburgh, in referring to the coke trade and the large increase in the number of coke ovens in the South, says:

Certain districts making an excellent quality of coke, and so situated that they can send their product into markets in which the Connellsville coke has met with a very large sale, have largely increased and are still more largely increasing their capacity for production. This is especially true of the West Virginia coking fields. Large numbers of ovens are in course of construction; several hundred are already completed in what may be termed the Upper Monongahela Coking District, or, say, the district in the neighborhood of Fairmont up to Clarksburg. Before the year closes we would not be surprised if 3,000 ovens were in operation in this district. We know now of nearly 2,000 that are either erected, in course of construction or contracted for, and we hear that from 1,000 to 1,500 more are contemplated and will probably be built. In the New River District of West Virginia bodies of the celebrated New River coking coal, which heretofore have not been accessible, owing to lack of railroad facilities, though they have been situated but from 5 to 10 miles from the Chesapeake & Ohio Line, are to be opened up by leaders to that road. These coal properties lie on the opposite side of the New River from that along which the Chesapeake & Ohio runs. The building of the bridge, which is either completed or about completed, will stimulate the laying of branch tracks into this coal field. Parties connected financially with the Chesapeake & Ohio Road are reported to have bought 100,000 acres of land in the neighborhood indicated. An Ohio party who owns some 30,000 acres of land in this neighborhood also contemplates building coke ovens, while an enterprise that is being floated in Virginia will include not only ore mines and furnaces in Virginia, but a tract of 12,000 acres of coking coal land in West Virginia upon which coke ovens will be

built, or the coal will be sent to the ovens and coked there, as is done at the Low Moore furnace of Virginia. Still further south, in the Pocahontas and Elkhorn districts, as soon as the line which is in process of construction from the Norfolk & Western Railroad to the Ohio river is completed, there will be another source of supply for Western furnaces to draw upon. The character of the coal deposits in Eastern Kentucky, as we have already pointed out in the columns of the Manufacturer, also indicates that during the present year may be produced some coke that will come into active competition with the coke from the Connellsville region.

THE phosphate beds belonging to the State of South Carolina are valued at \$7,000,000. The State debt of \$6,000,000 is about to be refunded at 4 per cent, and it is proposed to sell the phosphate deposits and wipe out the debt at once. A bill to authorize the Comptroller General to advertise the beds for sale has been favorably reported by the Ways and Means Committee of the House of Representatives, which, it is thought, will pass, despite the strong opposition from the phosphate interests of Charleston. The advocates of the bill figure that the State would save \$8,000,000, so far as the State debt and interest thereon is concerned, by cancelling the debt with the proceeds obtained from an immediate sale of the phosphate deposits. For, assuming the beds to last for fifty years, the State's royalty would amount to \$11,250,000; but interest on the debt for the same time would amount to \$12,000,000. The principal, too, would become due, and the excess above the royalty would be upwards of \$8,000,000. A great advantage which the purchasers of the beds would have would be their ability to fix the royalty at any figure they might see fit. The State royalty is \$1 per ton. The phosphate business of Charleston involves many millions of dollars, and the proposed legislation will no doubt be vigorously resisted.

A BILL has been introduced in the Senate of Virginia to regulate the business of foreign building and loan associations operating in that State. The main feature of the proposed law requires all such associations to deposit bonds of the State or the United States with the State treasurer in such amount that the cash sum shall equal ten thousand dollars, as a condition precedent to being allowed to do business within the limits of the Commonwealth. The bill, if enacted, will shut out "wild cat" concerns and benefit legitimate home enterprises, which, other things being equal, should always be preferred. It should be the aim of legislators throughout the South to protect, as far as possible, investors in the stock of all such associations, as well as savings banks; for, as a class, they are people who cannot afford to risk their ventures by entrusting their savings to irresponsible custodians.

Pensacola's Increasing Trade.

It would appear as though Pensacola is about to become something more than a mere lumber shipping port. The export of Alabama coal, which is about to begin to Cuban and other markets, will be chiefly through this port, and Alabama capitalists have recently returned from an extended trip to Cuba, where they have, according to report, bought 8,000 tons of ore as an experiment to mix with Birmingham ores for steel-making purposes. Just this traffic in itself, when it becomes a permanent institution, in the carrying out of coal and bringing back iron, will be a splendid thing for Pensacola. But in addition to this trade in minerals, several charters have been made for exporting foodstuffs. The Louisville & Nashville Railroad is improving its terminal facilities to aid this trade and expeditiously handle cargoes. Pensacola has reason to be encouraged at the outlook.

BUENA VISTA, one of Virginia's new towns, is greatly prospering, and its future seems very bright. The Lexington News, referring to its progress, says:

It is reliably reported by real estate agents that on Thursday over \$25,000 passed hands in Buena Vista as transactions in real estate in the new town. Outside capital is pouring in there and values are steadily advancing. Early spring will see two large furnaces in course of construction, with the probable construction of terra-cotta, fire-brick and porcelain works, to draw supplies from the rich clay banks on the place; a large wagon factory is assured, and the managers hope for and have every encouragement looking to the building of a large steel plant, rolling mill, &c., not to mention a large number of smaller industries to be put in operation. It is understood that the Buena Vista Co. will offer to erect and present to the county a handsome courthouse building there if the seat of the county government is moved from this point to Buena Vista. Buena Vista is moving, and that lively—a fact you will be convinced of if you go on the grounds.

IN a private letter from a visitor to Florence, Ala., it is said: "What Florence needs is good stores. There isn't a first-class dry goods or jeweler's store in the place." If this is true, there is a fine chance here for some enterprising men to meet the demand by starting stores in keeping with the needs of such a thrifty, growing town as Florence.

WE have before us the Special Bankers' Edition of the MANUFACTURERS' RECORD, numbering 100 pages. Baltimore should be proud of such a publication, and the New South, which finds such ample protection and encouragement in its columns, can seek no nobler exponent of its inexhaustible wealth in mine and soil. Certainly no more tempting publication can reach the capitalist seeking profitable investment.—Baltimore Journal of Commerce.

THE value of the work which is being done for the South by the MANUFACTURERS' RECORD cannot be overestimated. It is a power for good in the Southern States.—Rome (Ga.) Tribune.

A YEAR'S RECORD.

The South's Industrial Progress During 1889.

Eighteen hundred and eighty-nine has been a year of great activity throughout the South. Greater progress has been made in the development of the resources of this section than in any former year. New industrial enterprises, large and small, have crowded one upon another with great rapidity, while old plants have been enlarged to meet the steadily increasing demand for their products. Cotton mills, iron furnaces, machine shops and foundries and other lines of industry have all had a year, not only of much activity, but of large profits. And while the manufacturers of the South have enjoyed this season of prosperity, the farmers, as a class, have likewise been abundantly blessed, the yield of agricultural products being the largest on record.

The old year ends with the South enjoying a greater degree of prosperity than at any time since the war, and the new year will open with the prospects for the future as bright as the most enthusiastic friend of this section could desire. Millions of dollars of outside money are now seeking investment in the South, and New England, which has for years poured its surplus capital into the West, is now turning this golden stream Southward, and in Virginia, in Alabama, in Texas, in Tennessee, and in other States, New England men and money are taking an active part in the South's development.

Outside of this change of sentiment in New England regarding Southern investments, the most noteworthy feature of 1889 in the South's advancement is probably the attention which is being given to the manufacture of steel. Southern iron makers have entered the field to make steel with the same enthusiasm which marked their work a few years ago, when the active development of the iron interests commenced. Fort Payne, Greensboro, Middlesborough, Chattanooga and Birmingham are already enlisted in the steel-making line. Birmingham and Fort Payne have steel works well under way; Middlesborough has a contract for a \$1,000,000 plant; Chattanooga is soon to have large works backed by an abundance of capital, and Greensboro has projected furnace and steel works. This is one of the most gratifying features of Southern development. It means that the South, having demonstrated its destiny as the iron center of the country, is now preparing to enter the race for supremacy in steel making also.

A detailed comparison of the new enterprises organized during the last four years makes a most instructive exhibit:

	1889.	1888.	1887.	1886.
Iron furnaces	50	19	20	28
Machine shops and foundries	144	126	101	68
Agricultural implement factories	11	16	25	11
Flour mills	166	142	135	92
Cotton mills	111	70	77	9
Furniture factories	74	68	55	23
Gas works	15	27	35	24
Water works	117	84	88	42
Carriage and wagon factories	55	63	44	16
Electric-light companies	230	122	53	34
Mining and quarrying enterprises	605	450	562	174
Wood-working factories, including saw and planing mills, sash and door factories, stove factories, &c.	1,066	796	726	448
Ice factories	50	57	96	50
Canning factories	102	228	82	13
Stove foundries	9	4	4	8
Brick works	200	143	169	53
Miscellaneous iron and steel works, rolling mills, pipe works, &c.	67	40	71	36
Cotton compresses	28	37	39	13
Cotton-seed oil mills	99	27	18	4
Miscellaneous enterprises not included in foregoing	1,895	1,089	992	439
Total	5,135	3,618	3,430	1,875

Summing up the amount of capital and *capital stock* represented by our list of new enterprises and the enlargement of old plants during 1889, as compared with 1888, we have:

	1889.	1888.
Alabama	\$25,622,000	\$29,413,000
Arkansas	8,379,000	8,483,000
Florida	4,197,000	4,731,000
Georgia	26,130,000	14,205,000
Kentucky	33,212,000	28,801,000
Louisiana	12,243,000	6,350,000
Maryland	14,287,000	10,671,000
Mississippi	2,759,000	1,968,000
North Carolina	8,950,000	7,359,000
South Carolina	5,854,500	4,813,000
Tennessee	19,198,000	11,159,000
Texas	33,677,000	17,954,000
Virginia	34,090,000	12,774,000
West Virginia	11,999,000	10,114,000
Total	\$229,703,500	\$168,801,000

The number of new industrial enterprises organized in the South during the last four years, or since January 1, 1886, of which the MANUFACTURERS' RECORD has given full particulars, is over 13,700, divided as follows:

Iron furnace companies	126
Machine shops and foundries	441
Agricultural implement factories	61
Flour mills	535
Cotton mills	267
Furniture factories	230
Gas works	101
Water works	331
Carriage and wagon factories	178
Electric-light companies	475
Mining and quarrying enterprises	1,801
Lumber mills, including saw and planing mills, sash and door factories, stove factories, &c.	3,036
Ice factories	293
Canning factories	425
Stove foundries	25
Brick works	565
Miscellaneous iron and steel works, rolling mills, pipe works, &c.	184
Cotton compresses	114
Cotton-seed oil mills	148
Miscellaneous enterprises not included in foregoing	4,415
Total	13,744

In the following lists we give the name, location and character of business of the new enterprises projected during the last three months, and existing establishments rebuilt (after being burned or enlarged, having given the list for the first nine months of the year in our previous quarterly reports:

LOCATION.	NAME.	BUSINESS.
Alabama	S. M. Dean and others	Marble Quarry.
Anniston	Woodstock Iron Co.	Repaired Iron Furnaces.
Anniston	Villa Rica Lumber	Saw Mill.
Anniston	C. C. Huckabee	Cotton-oil Mill.
Anniston	E. M. Lewis	Nail-keg Factory.
Anniston	John A. Fry	Enlarged Carriage Fac.
Anniston	N. D. Harvey	Brick Works.
Anniston	Anniston Fur. & Nov. Wks.	Enlarg'd Furniture Fac.
Anniston	Anniston Gas Light Co.	Enlarge Plant.
Aquila	H. F. Taylor	Grist Mill.
Arbacoochee	J. G. Tyson	Stamp Mill.
Atlanta	W. E. Vassall	New Iron Mines.
Behrman	The Scottish Lumber Co.	Planing Mill.
Bessemer	De Bardeleben Coal & Iron Co.	Additional Coke Ovens.
Bessemer	De Bardeleben Coal & Iron Co.	Two Add'l Iron Furnaces.
Bessemer	De Bardeleben C. & I. Co.	Increased Capital.
Bessemer (n.r.)	De Bardeleben C. & I. Co.	New Coal Mining.
Birmingham	George H. Blinn & Son	Repaired.
Birmingham	George H. Blinn & Son	Reform Laundry.
Birmingham	Dora Coal Mining Co.	Coal Mines.
Birmingham	McDavid Printing Co.	Printing Office.
Birmingham	Ala. Land & Lumber Co.	Saw Mill.
Birmingham	Birmingham Mattress Co.	Mattress Factory.
Birmingham	Chronicle Publishing Co.	Printing Office.
Birmingham	Birmingham Gas, Elec. & Power Co.	Gas Works, &c.
Birmingham	Daily News Co.	Printing Office.
Birmingham	Con. Warrior Coal Co.	Coal Mining.
Birmingham	Magic City Machine Co.	Manufacturing.
Birmingham	Alabama Connellville Coal & Coke Co.	Increased Capital.
Birmingham	Beall Manf. Co.	Coupling-stick Factory.
Birmingham	Herdon Autom. Scale Co.	Scale Factory.
Birmingham	Wilson Publishing Co.	Publishing.
Birmingham	East Avondale Land Co.	Start Manufact'g Town.
Birmingham	Birmingham Engraving Land Co.	Publishing.
Birmingham	Improvement Co.	Enlarge Water Works.
Birmingham	Henderson Steel & Mfg. Co.	Blooming Mill.
Brierfield	Brierfield Coal & Iron Co.	Flr. Rolling Mill, &c.
Calera	Ciera Land Co.	Charcoal Iron Furnace.
Camden	McMillan	Publishing.
Camden	S. J. Block	Room Factory.
Centre	Langdon Iron Co.	Iron Furnace.
Choccolocco	Alabama Brick Manf. Co.	Brick Works.
Coalburg	E. M. Tutwiler	Coal Mine.
Collinsville	Williford & McFall	Iron Mine.
Columbia	Brantley & Thompson	Iron Works.
Columbia	Thomas Brantley	Planing Mill & Mach. Shop.
Columbiana	J. S. D. Lo. ke.	Coke Ovens.
Dadeville	J. F. Furner	Spoke & Handle Fact.
Dadeville	Farmers' Alliance	Cotton Mill.
Decatur	Decatur Iron, Ld. & Lum. Co.	Furnace.
De Armanville	Boho & Ragan	Cotton Gin.
Demopolis	Demopolis Oil Co.	Cotton Oil Mill.
Dunham	Dunham Timber Co.	Saw Mill.
Eufaula	Chattahoochee Fertiliz. Co.	Fertilizer Factory.
Eufaula	James Sherry	Grist Mill and Gin.
Fairview	Fairview Coal & Coke Co.	Cok. Mns., Ck. Ovn's, &c.
Florence	Flor. Electrical Wood-work Supply Co.	Wood-working factory.
Florence	Serage & Reynolds Pump & Lumber Co.	Doubled Capital and Increased Capacity.
Florence	Sweetwater Shoe Co.	Enlarged Factory.
Florence	Sweetwater Shoe Co.	Add Tannery.
Florence	Florence Cotton Mills Co.	Cotton Mill.
Florence	Curry Cultivator Co.	Implement Factory.
Florence	Charles Foster	Saw Mill.
Florence	McAlester Manf. Co.	Clothing Factory.
Fort Payne	PL Payne Rolling Mill Co.	Nail Mill and Keg Fact.
Fort Payne	Pendleton Bros.	Grist Mill & Wdg. Shp.
Fort Payne	Concordia Cot. & Fibre Co.	Cotton Factory.
Fort Payne	Alabama Lumber Co.	Sash and Door Factory.
Fort Payne	Davis Oil Co.	Oil Works.
Fort Payne	Bay State Furnace Co.	Furnace.
Fort Payne	J. H. Straight	Sash & Door Factory.
Fort Payne	Franklin Pottery Co.	Pottery.
Fort Payne	Trinidad Asphaltum Co.	Asphalt.
Fort Payne	PL Payne Rolling Mill Co.	Basic Steel Plant Wks.
Fort Payne	Fort Payne Lime Co.	Lime Works.
Gadsden	Hughes & Co.	Distillery.
Gadsden	Queen City Elec. & Lt. Co.	Enlarge Plant.
Gadsden	Etowah Distilling Co.	Distillery.
Gadsden	Etowah Alliance Mfg. Co.	Oil Mill & Fertilizer Factory.
Gate City	Pioneer Glass Works	Improve Glass Works.
Helena	Shelby Rolling Mills Co.	Enlarge Rolling Mill.
Hollywood	H. J. Johnson	Another Stave Mill.
Horse Creek	Dora Mining Co.	New Coal Mine.
Horse Creek	Horse Ck. Coal & Coke Co.	New C. Mine & Ck. Ovn's
Huntsville	E. B. Miller	Printing, &c.
Huntsville	Alabama Nursery Co.	Nurseries.
Jacksonville	W. H. Forney	Iron Mines.
Jasper	Dean & King	Saw Mills.
John's Station	De Bardeleben Coal & Iron Co.	Coke Plant.
Kennedy	Reuben Carter	Broom Factory.
Kynulga	R. C. Carter	Shingle Mill.
Littleville	Gunn & Solomon	Iron Mines.
Milton	Willis Bros.	Pottery.
Mobile	Lichtentag Pat. Stone Co.	Artificial Stone Works.
Mobile	J. W. Browne & Co.	Add New Shing. Mill.
Mobile	Mobile Mills Co.	Cotton Mill.
Mobile	Mobile Shingle Co.	Shingle Mill.
Mobile	Mobile Coal Co.	Marine Ways.
Mobile	Seaboard Manf. Co.	Shingle Mill & Dry-kiln
Mobile	Stewart & Butts	Dry Dock.
Mobile	Gulf Dry Dock Co.	Dry Dock.
Mobile	William Turner & Co.	Veneer Factory.
Montevallo	Brierfield Coal & Iron Co.	New Mines.

LOCATION.	NAME.	BUSINESS.
Montgomery	Montgomery Brewing Co.	Enlarged Brewery.
Montgomery	J. I. Craft	Publishing.
Mt. Hope	T. J. Jones and others	Develop Oil Lands.
New Decatur	Advertiser	Printing, &c.
New Market	W. F. Domany	Planing Mill.
Nottingham	E. S. Blackburn	Planing Mill.
Oak Hill	W. T. Harris	Grist Mill.
Oxford .....	.....	Water Works.
Patton	Va. & Alabama Mining Co.	Coal Mining.
Plantersville	Woodstock Iron Co.	Charcoal Works.
Pollard, nr.	W. B. Franklin	Saw Mill.
Renfro	Ashley & Lanier	Iron Mines.
Rock Mills	Ronedale Manf. Co.	Cotton Mill.
Rock Run	C. E. Baker	Machinery.
Russellville	W. W. Littlejohn	Ore Washers.
Russellville	A. Parrish & P. Campbell	Ore Washers.
Russellville	J. T. Walker	Ore Washer.
Salem	J. M. Hutchinson	Cotton Gin.
Selma	Canning & Son	Wagon Factory.
Sheffield	Sheffield Mfg. Co.	Add Stave & Bar. Fac.
Sheffield	Robbing's Machine Shop	Enlarge Shop.
Sheffield	Eureka Brick & Lum. Co.	Brick Works.
Sheffield	F. W. Puryear	Planing and Shingle Mill.
Sheffield	F. M. Knowles	Saw and Planing Mills.
Springville	Birmingham Min. & Mfg. Co.	Mining.
Sylacauga	E. W. Linn and others	Marble Quarries.
Talladega	Talladega Manf. Co.	Cotton Factory.
Troy	Troy Iron Works	Iron Works.
Troy	Troy Fertilizer Co.	Add Oil Refinery.
Troy	Joseph Minchener	Grist Mill.
Troy	D. W. Branch	Machine Shop.
Trussville	C. C. Truss	Wool Card. & Gst Mills
Troy	J. M. Langley & Co.	Water Works.
Tusculum	A. McWilliams	Flour Mill.
Tuskaloosa	E. F. Roden and associates	Electric Plant.
Tusculum	Tusculum Contracting Co.	Plan. Mill & Sash Fact'y.
Union Grove	Nearen	Saw Mill & Gin.
Union Springs	Union Spgs. Cot. Mill Co.	Cotton Mill.
Verben	J. Lovingsky	Planing Mill.
Wallace	Sullivan Timber Co.	Saw and Planing Mill, &c.
Woodward	Woodward Iron Co.	Improved Iron Furnace.

LOCATION.	NAME.	BUSINESS.
Alexandria	Ash & Ryman	Saw Mill.
Arkadelphia	Arkadelphia Lumber Co.	Dry-kiln.
Arkadelphia	Arkadelphia Lumber Co.	Increased Capital.
Arkadelphia	Arkadelphia Cotton Mills	New Machinery.
Barrettsville	Stratton Bros.	Ginnery.
Batesville	Bates. W. Wks. & El. Lt. Co.	Water Works.
Batesville	Bonanza Mining Co.	Mining.
Batesville	Skinner & Abbott	Enlarge Mining Plant.
Bay	Townley Bros.	Add Shingle Mill.
Beebe	C. Essig	Brick-yard.
Beebe	John N. Bowdenwish	Stave Factory.
Beebe	Beebe Stave Factory	Stave Factory.
Big Creek	J. W. Vincent & Co.	Saw Mill.
Buffalo City	E. C. Cook	Mining.
Camden	S. Q. Sevier, prest.	Electric Plant.
Canthron	Potomac Mining Co.	Coal Mine.
Carlisle	Carlisle Publishing Co.	Publishing.
Carlisle	Beach & Flint	Grist Mill & Gin.
Central	C. W. Minnie	Grist Mill and Gin.
Clarendon	White River Stave Co.	Add Electric Plant.
Conway .....	.....	Saw Mill.
Corning	W. H. Clark	Brick-yard.
Corning	J. W. Kesterson	Saw Mill.
Dardanelle	Elvins & Cravens	Cotton Gin & Corn Mill.
Dardanelle	E. M. Ford and others	Saw Mill.
Dodd City .....	.....	Lead Smelter.
Eureka Springs	Eureka Springs Interstate Gas Co.	Electric Plant.
Eureka Springs	Eureka Spgs. Sanitarium Co.	Electric Plant & Railway.
Evansville	Oscar Bryant & Co.	Shingle Mill.
Flippin	Mr. Young	Lead Mining.
Fordyce	Fordyce Lumber Co.	Lumber Mill.
Forrest City	J. H. Vann	Publishing.
Fort Smith	Thomas Huxley	Mining.
Guernsey	D. A. Grounds	Grist Mill & Gin.
Harrison	Copper City Mining Co.	Mining.
Helena	Helena Gas, Wtr. & Pwr. Co.	Sink Wells, &c.
Helena	Helena Electric Light Co.	Enlarge Plant.
Hickory Spg.	J. L. Davis & F. L. Brown	Shingle Mill.
Hingsland	H. Whitaker and others	Lumber Mill.
Hope	Hope Lumber Co.	Add Electric Plant.
Hot Springs	Northern Belt Mining Co.	Mining.
Huntington	Kansas & Texas Coal Co.	Art'n Well, C'l Chute, &c.
Jonesboro	G. W. Culbertson & Co.	Flour Mill.
Jonesboro	Spring, Lum. & Coop. Co.	Stave Factory.
Lewisville	W. F. Holbert	Wagon Factory.
Lilley	Johnson Lumber Co.	Lumber Mill.
Little Rock	Hendricks, Cook & Co.	Planing Mill, &c.
Little Rock	Kawlings & Ketcher	Galvanized Iron Works.
Little Rock	Little Rock St. Railway Co.	Electric Plant.
Little Rock	Am. Wtr. Wks. & Gas Co.	Stand Pipe.
Little Rock	Little Rock Elec. Light Co.	Enlarge Plant.
Little Rock	Zeb. Ward	Granite Quarries.
Little Rock	F. Roesch & Co.	Carriage & Wagon Fac.
Lonoke	Lonoke Lumber Co.	Lumber.
Lonoke	Chaplain & England	Brick-yard.
Mammoth S'g	Shelby, Farmworth & Gaffner	Brick-yard.
Mammoth S'g	Crescent Roller Mill Co.	Flour Mill.
Mammoth S'g	Calumet Cotton Factory	Cotton Ginnery.
Mammoth S'g	Sunny South Lumber Co.	Saw Mill.
Mammoth S'g	E. Shapp	Improved Flour Mill.
Mammoth S'g	Crescent Roller Mill Co.	Add Electric Plant.
McCrory	Sturdivant & Atkinson	Cotton Gin.
Mount Ida .....	.....	Publishing.
Nettleton	W. R. Santley & Co.	Saw Mill.
Newport	Conway & Clardy	Publishing.
Newport	Morris & Dickersa Mfg. Co.	Stave Factory, &c.
Pacesville	E. M. Ayars	Saw Mill.
Painesville	W. R. Santley	Saw Mill.
Perryville	W. A. Tyler	Saw Mill.
Perryville	Barnett, Bevans & Freeman	Cotton Ginnery.
Pine Bluff	Bluff City Lumber Co.	Lumber Mill.
Pine Bluff	Cahall & Sweeney	Boiler Repair Shop.
Pine Bluff	Pine Bluff Mill & Elev. Co.	Electric Plant.
Redfield	Crawford & Allen	Develop Timber Lands.
Rogers	J. A. C. Blackburn	Spoke Factory.
Silver Springs	Silver Springs Silver Springs Mining Co.	Mining, &c.
Smithton .....	.....	Saw Mill.
Stevens	F. E. Morgan & Thomas	Coal & Fire Clay Mine.
Stuttgart	Hardison	Brick-yard.
Stuttgart	Henry Flood	Lumber Mill.
Stuttgart	Beard State Lumber Co.	Printing, &c.
Texas	C. J. Holt	Machine Works.
Thornton	W. R. Pearson	Saw Mill.
Warren	W. H. Wheeler, prest.	Cotton Mill.
West Point	Jones Timber Co.	Lumber & Stave Mills.
Wilmar	J. T. D. Anderson	New Cotton Gin.
Wynne	A. C. Thomas & Co.	Saw Mill & Stave Fact'y.
Yellville	W. L. Potter and others	Zinc & Copper Mines.
Yellville	L. Matlock, manager	Lead Smelter.
Yellville	L. Matlock	Marble Quarries.

LOCATION.	NAME.	BUSINESS.
Apalachicola	Apalachicola Iron Works	Foundry & Mch. Shop.
Apalachicola	Thos. W. Bamberger	Canning Factory.
Apalachicola	Kimball Lumber Co.	Electric Plant.
Apalachicola	Kimball Lumber Co.	Canning Factory.
Apalachicola	Kimball Lumber Co.	Planing Mill.
Apoka	C. H. Brewster	Coffee Roast. & Grd. Mill.
Arcadia	Peace River Phosphate Co.	Phosphate Mines & Wks.
Blue Springs	W. H. Morgan	Barrel Factory.
Carroll	John H. Cross Lumber Co.	Add Shingle Mill.
Charlotte Hbr	J. G. Lee	Publishing.
Clay County	J. W. & B. H. Powell	Turpentine Distillery.
Cross Keys	Sistrunk & Jordan	Saw Mill.
Dayton	E. Dillingham	Wood-working Factory.

LOCATION.	NAME.	BUSINESS.	LOCATION.	NAME.	BUSINESS.	LOCATION.	NAME.	BUSINESS.
De Funiak Sps.	Orr & Clark	Saw Mill.	Dover (near).	John Alderman	Saw Mill.	Gt. Crossings.	Stand. Lead & Zinc Min. Co.	Lead Mines.
De Funiak Sps.	John L. McKinnon	Saw Mill.	Elizabeth		Gold Mine & Stamp Mill.	Hampton	Wm. Hatfield	Grist Mill.
De Land.	Daily News	Printing, &c.	Empire.	Empire Lumber Co.	New S. Mill & Dry-kilns	Harrodsburg.	Florence St. n. Washer Co.	Box Factory & Dry-kiln.
Dunelton.	Dunelton Phosphate Co.	Phosphate Mining.	Empire	Empire Lumber Co.	Plan Mill & Elec. Plant.	Harrodsburg.	H. E. & P. Power Co.	Flour Mill.
Emmetsburg.	Indian River Stm.-boat Co.	Boat Ways.	Enigma.	West & Gunn	Added Shingle Mill, &c.	Hartford.	John R. Phipps	Flour Mill.
Fernandina.		Saw Mill.	Fannin Co.	Robt. Gardner and John	Iron Mining, &c.	Hawesville		Gas Well.
Florida City.	R. C. Bradley	Broom Factory.		McNichol.		Henderson	W. G. Head	Tobacco Factory.
Florida.	Atlanta Perfumery Co.	Perfumery Factory.	Flat Rock.	M. M. Bowlen	Cotton Gin.	Henderson	Hen. Co. Nat. Gas Min'g	Natural Gas.
Fernandina.	Loomis Mfg. Co.	Saw Mill.	Forsyth.	Forsyth Manfg. Co.	Cotton Factory.	Hopkinsville.	Western Lunatic Asylum	Electric Plant.
Fort Myers.	Charles A. Green	Planing Mill.	Gainesville.	Dahlonega Co.	Gold Mining.	Laif.	Westbren Bros.	Flour Mill.
Gainesville.	J. Cammer & Sons	Saw Mill.	Gainesville.	Etowah Gold Mining Co.	Gold Mining.	Lexington.	J. C. Henson & H. T. Groom	Planing.
Gainesville.	Gainesville Furn. Mfg. Co.	Furniture Factory.	Gainesville.	Osborn & Wolcott Mfg. Co.	Chair Factory.	Lexington.	Lexington Water Works	Enlarged Works.
Green Cove Sp.	Hernando Tobacco	Cigar Factory.	Gaysville.	Morris & Son	Added Grist Mill.	Lexington.	Standard Clay & Min. Co.	Mining.
Hammond.	Fla. Pathfinder Pub. Co.	Publishing.	Graysville.	Graysville Min. & Mfg. Co.	Whiskey Distillery.	Lexington.	Lexing. Water Works Co.	To Enlarge Plant.
Jacksonville.	Richard Walzer	Trunk Factory.	Graysville.	Chewacha Lime Works		Louisville.	Ky. & Ind. Contract Co.	Manufactures.
Jacksonville.	Jacksonville Water Wks.	Extend Mains.	Graysville.	J. F. Turner	Grist Mill.	Louisville.	Collins Varnish Co.	Enlarge Works.
Jacksonville.		Shingle Mill.	Graysville.	S. Wile	Flour & Corn Mill.	Louisville.	Medical Progress Co.	Printing, &c.
Jacksonville.	Merrill-Stevens Eng. Co.	Machine Works.	Griffin.	Griffin Broom Manfg.	Added Mattress Factory.	Louisville.	Louisville Fire Brick Co.	Fire Brick.
Jacksonville.	H. M. Tritat	Cigar Factory.	Griffin.	Thomson-Houston Elec. Co.	Electric Plant.	Louisville.	Gault House	Electric Plant.
Key West.	Del Pino Bros.	Cigar factories.	Guyton	Farmers'-Coopert Mfg. Co.	Fertilizer Factory.	Louisville.	Brooklyn Mining Co.	Mining.
Key West.	South Florida Cattle Co.	Slaughterhouse House, &c.	Haddock Sta't	L. L. Cubbedge	Added Grist Mill.	Louisville.	Ky. Wagon Manfg. Co.	Wagon Works.
Kissimmee.	Lemuel Hedges	Publishing.	Hartwell.	S. N. Brown & Co.	Corn Mill, &c.	Louisville.	Senn & Ackerman	Ice Factory at Brewery.
Lake Butler.	J. A. Beverly	Saw and Planing Mill.	Jackson	J. R. McCord	Plow Factory.	Louisville.	Etheridge Manfg. Co.	Furniture Factory.
Lake City.	F. L. Kern	Steam Laundry.	Joll	G. A. McDaniel	New Mill.	Louisville.	South. Plan. Mill. & Lum. Co.	Planing Mill.
Lake City.	Lake City Impr. Ass'n		Jolly	R. W. Hale	Cotton Gin.	Louisville.	Joseph Schapinski	Furniture Factory.
Lakeland.	Mr. Palmer and others.	Cigar Factory.	Lafayette.	W. L. Clements	Iron & Lead Mine.	Louisville.	Cartwright Manfg. Co.	Wagon Factory.
Lakeview.	J. B. Beck, Jr.	Publishing.	La Fayette.	William Duncan	Publishing.	Louisville.	Louisville Over & Rev. Co.	Increase capital.
Leesburg.	Ocklawaha Canal	Canal, &c.	La Grange.	Geo. W. Truitt Feby's Co.	Electric Factory.	Louisville.	N. Struck & Bro.	Planing Mill.
Leesburg.	Orange Co.		La Grange.	Southern Female College.	Electric Plant.	Louisville.	R. B. Cotter Lumber Co.	Plan. Mill & Box Fact'y
Leesburg.	Lishon Orange & Tob. Co.	Cigar Factory.	Locust Grove.	R. F. Smith president.	Cotton Oil.	Louisville.	Falls City Bt. & Sh Mfg. Co.	Boot & Shoe Factory.
Little River.	Biscayne Bay & Little R.	Fibre Factory, &c.	Macon.	Central City Fertilizer Co.	Fert. Fact'y & Cot'n Mill.	Louisville.	Greenville Tobacco Wks.	Tobacco Factory.
Macclenny.	J. A. Cowart	Tannery.	Macon.	Empire Match Co.	Match Factory.	Louisville.	National Sanitary Co.	Sanitary Appliances.
Markham.	Mr. Sheets	Box Factory.	Macon.	Macon Barrel Factory.	Match Plant.	Louisville.	Grayson County Asphalt	Asphalt Mines.
McIntosh.	J. Y. Pettet	Crate Factory.	Macon.	W. T. Lang.	Doubled Knitting Mill.	Lucas.	Mining & Contract Co.	Axe Handle Factory.
Melrose.	Herbert Blake	Rice Mill.	Macon.	Georgia Chemical Works.	Fertilizer Factory.	Madisonville.	U. J. Holland	Flour Mill.
Middleburg.	A. H. Moss	Brick-works.	Macon.	E. J. Willingham	Furniture Factory.	Marion.	Evan Davis	Rock Quarries.
Middleburg.	Green Cove Brick Works	Brick-works.	Macon.	Alberta Pench Co.	Fruit Raising & Canning	Mayfield.	John E. Wright & Co.	Spoke Factory.
Mt. Pleasant.	J. H. Bevis	Wood Shop.	Macon.	Empire State Mining Co.	Tin Mining.	Mayfield.	Mayfield Sp. & Hand. Co.	S. oke & Handle Factory
Mt. Pleasant.	J. H. Bevis	Grist Mill and Gin.	Macon.	Macon Oil & Fert. Co.	Cotton Oil Mill.	Mayfield.	Mayfield Woolen Mills	Doubled Mill.
Ocala.	Chandler, Young & Co.	Enlarge Novelty Works	Macon.	A. & A. M. Block & A.	Whiskey Distillery.	Maysville.	Maysville Gas Works	Doubled Capacity.
Ocala.	W. F. Taylor	Added Dry-kiln.	Marietta.	Uman		McHenry.	McHenry Coal Co.	Hoisting Plant.
Ocala.	La-Criolla Cigar Mfg. Co.	Cigar Factory.	Marietta.	Southern Marble Co.	Enlarge Operations.	Middlesb'gh.	Edes, Mixer & Heald	Zinc Works.
Ocala.	Yonge Bros & Co.	Sash & Door Factory.	Milledgeville.	Cobb County Cotton Mills.	Cotton Mill.	Middlesb'gh.	Edes, Mixer & Heald	Fire-brick Works.
Orange City.	Mr. Hatchett	Publishing.	Milledgeville.	Warren Edwards	Bottling Works.	Middlesb'gh.	Middlesb'gh Lumber Co.	Planing Mill.
Palatka.	E. C. Post	Publishing.	Mineral Bluff.	Value Marble Co.	Marble Quarries & Mill.	Middlesb'gh.	Cumbl'd Gap F. Brick Co.	Fire-brick & Swr. P'wks
Palatka.	Palatka Milling Co.	Dry-kiln.	Newnan.	W. W. Phillips	Shingle Mill.	Middlesb'gh.	G. L. Reis and others.	Fire-brick & Swr. P'wks
Palatka.	Butler & Riles	Shingle Mill.	Newnan.	R. D. Cole Manfg. Co.	Enlarged Machine Shop.	Middlesb'gh.	Middlesb'gh Power Co.	Power Plant.
Pensacola.	James Nicholson	Canning Factory.	Nw. Eng City	New Eng'd Land, Coal, & Iron	New Town, Coal & Iron	Middlesb'gh.	Middlesb'gh Ice Fac'y	Ice Factory.
Pensacola.	John W. Woolfolk	Marine Railway.	Pitts.	Iron & Manfg. Co.		Middlesb'gh.	Middlesb'gh Coffin	Coffin Factory.
Pine Barren.	McMillan Mill Co.	Shingle Mill.	Pulaski.	Mr. Cochran	Publishing.	Middlesb'gh.	Watt & Co.	Basic Steel Plant.
Quincy.	Fenton & Brown	Cigar Factory.	Richland.	A. J. Tiron	Printing, &c.	Middlesb'gh.	Middleb'gh Fur. Fact'y	Furniture Factory.
Quintette.	James McCullough	Brick-yard.	Rochelle.	L. Brown	Planing & Shingle Mill.	Middlesb'gh.	News Printing Co.	Publishing.
Salmarsh.	K. D. Byrne	Planing and Saw Mill.	Rome.	A. L. Eversly and others.	Brick, Light & Ck. Whl. Wks.	Middlesb'gh.	W. W. Demming	Planing Mill & Dry-kiln.
San Antonio.	San Antonio Lumber Co.	Lumber Mill.	Rome.	Frank A. Wynn	Broom Factory.	Middlesb'gh.	Middlesb'gh Bent Wd. Wks.	Bent Wood Furniture.
San Pablo.	Shutter & Morrow	Shingle Mill.	Sandersville.	J. F. McClure	Flour Mill.	Middlesb'gh.	Cumberland Gap Iron Co.	Iron Furnace.
St. Andrews Bay.	Salisbury Lumber Co.	Planing Mill.	Sand Hill.	Charles C. Brown	Publishing.	Middlesb'gh.	Middlesb'gh Power Co.	Power Plant.
Starke.	C. L. Peck & T. Fewkes.	Rice Mill.	Savannah.	Broom, Eady & Willis.	Cotton Ginney.	Middlesb'gh.	W. Davis, Jr.	Coal Works.
Starke.	Muck Land Drainage Co.	Saw & Rice Mill.	Savannah.	Tide Water Oil Co.	Oil Works, &c.	Middlesb'gh.	H. O. W. Davis	Coal Mining.
Tampa.	Tampa Lumber Co.	Saw Mill.	Savannah.	Screen Rice Mill	Built Elevator.	Middlesb'gh.	Evans & Gent	Coal Mining.
Tampa.	Tampa Cigar Manfg. Co.	Cigar Factory.	Savannah.	Planters Rice Mill	Rice Mill.	Middlesb'gh.	J. W. Ralston	Coal Mining.
Tampa.	Tampa Water Works Co.	Water Works.	Savannah.	Savannah Soap Co.	Soap Works.	Middlesb'gh.	Robert Ralston	Coal Mining.
Tampa.	R. Mudge	Electric Works.	Savannah.	Intimigraire Co.	Patent Medicines.	Middlesb'gh.	E. E. Malcolm	Coal Mining.
Tampa.	Tampa Street Railway Co.	Machine Shop, &c.	Savannah.	S. P. Shottler & Co.	Paint Factory, &c.	Middlesb'gh.	Evans Jones	Coal Mining.
Tallahassee.	Newport Springs & Land	Improvement Co.	Savannah.	Savannah Plumbing Co.	Plumbing, &c.	Middlesb'gh.	C. W. Livermore	Coal Mining.
			Savannah.	De Soto Hotel	Electric Plant.	Middlesb'gh.	H. Holbrook Curtis	Coal Mining.
			Smyrna.	Concord Woolen Mills.	Woolen Mill.	Middlesb'gh.	A. J. Jardine	Coal Mining.
			Social Circle.	Gibson & Adams	Cotton Gin.	Middlesb'gh.	E. J. Delcan	Coal Mining.
			Summerville.	Summerville Lumber Co.	Sash & Door Factory.	Middlesb'gh.	H. M. Harris	Coal Mining.
			Tallapoosa.	A. H. Moore and others.	Gold Mine.	Middlesb'gh.	Barker & Gray	Coal Mining.
			Tallapoosa.	Verapah Lumber Co.	Brick & Gs Wks.	Middlesb'gh.	S. A. Forbes	Coal Mining.
			Tallapoosa.	Sutherland & Blackman	Foundry & Mach. Shop.	Middlesb'gh.	G. L. Reis	Coal Mining.
			Tallapoosa.	S. M. Stark	Pants Factory.	Middlesb'gh.	Joseph Lowe	Coal Mining.
			Tallapoosa.	Alvin Porter	Knitting Mill.	Middlesb'gh.	W. S. Groome	Coal Mining.
			Tallapoosa.	W. P. Harvey	Water Works.	Middleb'gh.	Mr. Oberhausen	Presale Factory.
			Tallapoosa.	B. R. & R. Cowper	Mining.	Monticello.	M. J. Marshall	Plan. Mill & Sash Fact'y
			Trenton.	Trenton Land & Imp. Co.		Myers.	Wash'ton Mfg. & Min. Co.	Saw Mill.
			Trenton.	H. L. Davis	Publishing.	New Hope.	Bartley, Johnson & Co.	Enlarge Distillery.
			Trenton.	Smith & Spradley	Planing Mill.	New Hope.	Bell of Nelson Distill'y Co.	To Enlarge Distillery.
			Trenton.	P. B. Bond and others.	Water Works.	Newport.	The Amer. Axe & Tool Co.	Tool Works.
			Trenton.	Kramer & Graves	Plan. Mill & W'd'g Fact.	Newport.	Harry Wadsworth	Watch-case Factory.
			Tunnel Hill.		Planing Mill.	Newport.	Davis & Kendrick	Blushing.
			Tunnel Hill.	Chatt. Mining & Mfg. Co.	Brick-yard.	Newport.	Newport Electric Plant	Electric Plant.
			Tunnel Hill.	Chatt. Mining & Mfg. Co.	Saw Mill.	Newport.	Freeman Perfume Co.	Perfume Factory.
			Valdosta.	Mayor and Council	Water Works.	Petersburg.	Petersburg Milling Co.	Corn Mill.
			Washington.	Erwin & Callahan	Brick & Gs Wks.	Newport.	Ky Sand, Loam & Earth Co.	Sand Mining.
			Washington.	Excelsior Manfg. Co.	Build Cotton-oil Mill.	Newport.	Fitzgerald Pat. Prepared	Plastic Works.
			Waymansville.	Waymanman Factory	Add. Sprinkling M'chine	Owensboro.	Dean Field Coal Mine Co.	Coal Mine.
			Waynesboro.	Mobley & Lassater	Carriage Factory.	Owensboro.	Jno. Hanning Distill'ry Co.	Distillery.
			West Point.	Union Milling & Mfg. Co.	Flour & Grist Mill.	Owensboro.	Glenmore Distillery Co.	Distillery.
			White Plains.	Tappan & Walker	Cotton Gin.	Owensboro.	H. E. Miller	Saw Mill.
						Paducah.	Mayfield Woolen Mills	Woolen Mill.
GEORGIA.			KENTUCKY.			Paris.	Johnson & Pryor	Publishing.
Albany.	Albany Fertilizer Co.	Fertilizer Factory.	Aberdeen.	King Bros. & McNutt	Saw Mill.	Paris.	Louis Wetzel	Flour Mill.
Albany.	Albany Water Wks. Co.	Water Works.	Altaville.	John Adams	Saw Mill.	Petersburg.	Petersburg Milling Co.	Corn Mill.
Almon.	H. W. Hardwick	Brick & Tile Works.	Ashtand.	Asb. El. Lt. & Power Co.	Enlarge Plant.	Pineville.	T. J. Asher	Saw Mill.
Americus.	A. Sullivan	Foundry & Mch. Shop.	Ashtand.	Otto Adams	Paint Factory.	Pineville.	R. W. & L. L. Johnson	Planing Mill.
Americus.	O. E. Hagerman	Cracker & Cake Facy, &c.	Ashtand.	Karnap & Baxter	Manfr. Iron Cornice.	Pleasant Val-je Mill.	W. S. Fant	Flour Mill.
Americus.	Americus Manf. & Imp. Co.	Manufactures.	Ashtand.	Ashtand Electric-light Co.	Electric Plant.	Poole's Mill.	The Wheelers	Flour Mill.
Athens.	Athens Publishing Co.	Printing, &c.	Augusta.	Pioneer Chemical Co.	Manufacture Medicine.	Princeton.	Princeton Gas & Min'g Co.	Develop Gas & Oil Lands
Athens.	Athens Gas Co.	Enlarge Works.	Augusta.	H. V. Morris	Publishing.	Richmond.	H. C. Rice	Distillery.
Athens.	William Fleming & others.	Iron Foundry.	Augusta.	J. C. Bayne & Bro.	Flour Mill.	Russellville.	A. G. Gooch & Sons.	Grist Mill.
Athens.	Athens Bobbin Mill	Bobbin Mill.	Basket Stat'n.	Charles Karrick	Coal Mines.	Scottville.	Bowers, Mitchell & Co.	Planing Mill.
Athens.	John & George Booth	Enlarge Tannery.	Battleyville.	S. D. Lloyd	Flour Mill.	Sharpville.	W. D. Sharp & Co.	Remodeled Flour Mill.
Atlanta.	Atlanta Guano Co.	Fertilizer Factory.	Boaz.	Louis Heiler	Flour Mill.	Somersct.	De Coppet Ice Co.	Added Electric Plant.
Atlanta.	Atlanta Eleva. & Whse. Co.	Elevator, &c.	Bowling.	T. B. Hamilton & W. E.	Jeans Pants Factory.	Sturgis.	A. J. Sturges & Co.	Flour Mill.
Atlanta.	James Osler & Co.	Furniture Factory.	Green.	Cates		Union.	John G. Roach	Enlarge Distillery.
Atlanta.	Piedmont Match Factory.	Match Factory.	Green.	Turner-Alexander Cider	Cider & Bottling Works.	Whiteville.	George Capp	Whiskey Distillery.
Atlanta.	West Atlanta Elec. R. R.	Electric Plant.	Green.	Turner-Alexander Cider	Cider & Bottling Works.	Williamstown.	Carter & Vallandigham	Remodeled Flour Mill.
Atlanta.	American Match Co.	Doubled Factory.	Bowling.	Turner-Alexander Cider	Cider & Bottling Works.	Worthington.	E. Murray	Whiskey Distillery.
Atlanta.	Atlanta Engraving Co.	Enlarge Works.	Bowling.	Turner-Alexander Cider	Cider & Bottling Works.			
Atlanta.	Atlanta & Lithonia R. R. Co.	Machine Shop.	Bowling.	Turner-Alexander Cider	Cider & Bottling Works.			
Atlanta.	H. Moore	Publishing.	Brandenburg.	Consolidated Gas Co.	Gas Works.			
Atlanta.	Atlanta Machine Works.	Enlarge Plant.	Brandenburg.	Kendall Mining Co.	Mining.			
Atlanta.	Woodward Lumber Co.	Dry-kiln.	Brandenburg.	Kenfro Bros.	Furniture Shop.			
Atlanta.	Southern Soap Works	Soap Factory.	Butler.	E. C. Hagenmeyer	Flour Mill.			
Atlanta.	Foot & Zuber Lumber Co.	Lath & Shingle Mill.	Cattlettsburg.	Thomas Lumber Co.	Saw Mill.			
Atlanta.	Gate City Gas Light Co.	Enlarge Plant.	Cattlettsburg.	Thomas Lumber Co.	Dry-kiln.			
Atlanta.	Union Mill & Warehouse Co.	Improved Flour Mill.	Cattlettsburg.	Williams & Co.	Furniture Factory.			
Atlanta.	Gate City Glass Co.	Glass Works.	Cattlettsburg.	J. G. Rotlan & Co.	Flour Mill.			
Atlanta.	South. Railway Equip. Co.	Manufactures.	Central.	Central Coal & Iron Co.	Build Coke Ovens.			
Austell.	Spring Co.	Improve Springs, &c.	Central City.	K. V. Thomas, Jr.	Printing.			
Bainbridge.	Hutchinson & Strickland.	Wood Pulp Mill.	Clay City.	Clay City Brick Co.	Brick & Tile Works.			
Barnesville.	W. H. Parker	Saw Mill & Cotton Gin.	Clay City.	Kenney Lumber Land & Co.	Dry-kiln.			
Barnesville.	W. A. Worshams	Cotton Ginney.	Clay City.	Ky. Union Railway Co.	Machine Shops.			
Bolingbroke.	John E. Wadley	Saw Mill & Shingle Mill.	Clay City.	Ky. Union Railway Co.	Electric Plant.			
Brunswick.	Brunswick Ice & Brew. Co.	Ice Fact. & Bottling Wks.	Clagdon.	Glasgow Water Co.	Enlarge Plant.			
Brunswick.	Brunswick Fndry, Mach. & Fndy, Mach. Shop, &c.		Corinth.	Hutchinson & Carder	Flour Mill.			
Brunswick.	Brunswick Lt. & Wtr. Co.	Doubled Gas Works.	Covington.	Natural Asphalt Min. Co.	Asphalt Mining.			
Brunswick.	George Walt & Sons	Paper Mill.	Covington.	Overman & Shrader	Electric Plant in Factory.			
Brunswick.	South Brunswick Termi- nal, Comp. & Mfg. Co.	Cotton Compress, &c.	Covington.	Ruttler-Schlickman Pkg. Co.	Packing-house, &c.			
Brunswick.	R. R. Hopkins	Trunk Factory.	Covington.	Sig. Lutzern & Mfg. Co.	Manufactures.			
Brunswick.	W. Huber	Dry-dock.	Covington.	Ches. & Ohio Cl. & Ck. Co.	Build Coke			
Brunswick.	W. Huber	Soap Factory.	Cynthiana.	Crater Mining Co.	Lead Mine.			
Brunswick.	W. Morgan	Furniture Factory.	Danville.	Cent. Kentuck. Carr'g Co.	Carriage Factory.			
Buchanan.	A. L. Morgan	Shingle Mill & Gin.	Danville.	Funk & Anderson	Flour Mill.			
Butler.	R. Manfort & Son	Variety Works.	Dawson.	Gregory, High & Co.	Flour Mill.			
Butler.	A. J. Fountain	Cotton Ginney.	Difficult.	St. Bernard Coal Co.	Improved Plant.			
Canton.	Calvin & Corrigan	Barrel Factory, &c.	Earlington.	St. Bernard Coal Co.	Improved Plant.			
Canton.	Georgia Mica Mining Co.	Mica Mining.	Falls of Rough. L. Green	Erect Saw Mill.				
Carrollton.	J. P. Jones	Buggy Factory.	Flamingburg.	Thomson-Houston E. L. Co.	Electric Plant.			
Carrollton.	Northern parties.	Dev. Bonner Gold Mines	Frankfort.	Jones Bros.	Machine Shop.			
Cartersville.	James Gilreath	Manufacture Factory.	Frankfort.	Labrot & Graham	Whiskey Distillery.			
Cartersville.	J. H. Baker	Flour Mill.	Franklin.	C. W. Leak	Steam Laundry.			
Cartersville.	Standard Iron Co.	Iron Mines, &c.	Franklin.	G. E. Leak	Flour Mill.			
Cartersville.	Cedartown Lumber Co.	Added Foun. & Mch. Shop.	Franklin.	Franklin Mill Co.	Grain Elevator.			
Cedartown.	J. Phillips & others.	Found. & Machine Shop.	Fulton.	Fulton Spoke Co.	Spoke Factory.			
Cedartown.	J. A. Peck & others.	Iron Mine.	Georgetown.	Georgetown Water Co.	Add. Electric Plant.			
Cedartown.	Cedart'n W'g. Fac. & Fdy.	Wagon Factory & Fdy.	Georgetown.	J. K. Adams	Flour Mill.			
Cedartown.	Cherokee Iron Co.	Repairing Furnace.	Glasgow.	Ky. Southern Oil & Gas Co.	Oil Refinery.			
Cedartown.	J. A. Wynn	Broom Factory.	Grand River.	Grand Rivers Co.	Build Town, &c.			
Cochran.	Carroll Lumber Co.	Planing Mill.	Greenup.	George Stephens & Co.	Build Town.			
Cole City.	Investment Co.	Coke Ovens.						
Columbus.	Greer & Hiett	Plumbing Shop.						
Columbus.	Columbus Iron Works	Enlarge Plow Factory.						
Conyers.	A. Q. C. Medicine Co.	Medicine Factory.						
Conyers.	Farmers' Mercan. Mfg. Co.	Oil Mill & Fert. Factory.						
Corbin.	W. Patterson & H. Dun- nah	Saw Mill.						
Cordele.	Blaggett, Moore & Co.	Barrel Factory.						
Cordele.	City	Water Works.						
Cordele.	Hide & Holmes	Machine Shop.						
Corinth.	Miller & Hogan	Cotton Mill.						
Crawfish Spgs.	S. F. Osburn & others.	Pencil Cedar Factory.						
Dahlonega.	W. B. Long	Silver Mill.						
Dahlonega.	Dahlonega Gold Mining	Mining.						
Darien.	Sapelo Land & Lumb. Co.	Lumbering, &c.						

LOCATION.	NAME.	BUSINESS.
New Orleans	Amer. Cash Register Co.	Cash Registers.
New Orleans	Consumers' Ice Co.	New Ice Factory.
New Orleans	Amer. Wt. Lead & Color Co.	Colnaised Capital.
New Orleans	La. Electric Light Co.	Enlarged Plant.
N. Orleans, nr.	Luther & Moore, of	Saw Mill.
New Orleans	Rogers & Kern	Vinegar Factory.
New Orleans	Thomas Pickles	Marine Ways.
New Orleans	Silver Creek Mining &	Mining, &c.
New Orleans	Milling Co.	
New Orleans	Lewis Grunwald Co.	Piano Factory.
New Orleans	Brooklyn Cooperage Co.	Barrel Factory.
New Orleans	La. Land & Sugar Co.	Sugar Refinery, &c.
New Orleans	Sabine Construction Co.	
New Orleans	S. L. Robertson	Enlarged Dry-dock.
New Orleans	La. Elec. Lt. & Power Co.	Greatly Enlarge Plant.
New Orleans	Otis Manf'g Co.	Saw Mill & Box Factory.
New Orleans	La. Hdq. & Wire Fence Co.	Build Hedge Fences.
New Orleans	Am. Wh. Lead & Color Co.	Increased Capital.
New Orleans	P. W. Didman & Co.	Candy Factory.
New Orleans	H. Gardie	Vinegar Factory.
Pattersonville	L. S. Clark	Electric Plant.
Pattersonville	Pattersonville Sash, Door	Planing Mill.
Pattersonville	& Blind Factory, Lim.	
Pratt's Mill	Pratt & Bro	Saw Mill.
Pointe Coupee	James H. Stonaker	Sugar Mill.
Robeline	Rewis Bros.	Saw Mill.
Shreveport	Evening Star	Printing, &c.
Tangipahou	Pool & Ritchie	Brick-yard.
Tangipahou	M. S. Newson's Sons	Brick-yard.
Tangipahou	Ames Kent & Son	Brick-yard & Saw Mill.
Thibodaux	Ernest Roger	Sugar House.
Vidalia	Natchez Construction Co.	Saw Mill.

MARYLAND.

Aberdeen	Aberdeen Bed-spring Co.	Manfr. Bed Springs.
Annapolis	Exchange Oyster Co.	Oyster-packing House.
Baltimore	Regester Manf'g Co.	Iron Works.
Baltimore	John D. McGonigle	Surgical Inst't Factory.
Baltimore	Chesapeake Shipy Co.	Enlarge Plant.
Baltimore	Amer. Mortuary Trust &	Specialties.
Baltimore	Smith & Dixon	Paper Bag Factory.
Baltimore	Baltimore Silver Plate Co.	Hardware Factory.
Baltimore	Eureka Box Co.	Box Factory.
Baltimore	Crook, Horner & Co.	Steam Fitting Estab.
Baltimore	Int. Tel. Dist. & Call Co.	Electric Plant.
Baltimore	Manf'g Co.	Burial Casket Factory.
Baltimore	Rose, Whitehurst & Co.	Lampblack Factory.
Baltimore	G. Ober & Sons Co.	Fertil. & Chemical Wks.
Baltimore	Charles C. Lursen	Box Factory.
Baltimore	R. Armiger & Sons	Refrigerator Factory.
Baltimore	James James	Lime Works.
Baltimore	Kirwan & Tyler	Enlarged Can Factory.
Baltimore	Vaile & Young	Metal Works.
Baltimore	Southern Engraving Co.	Engraving.
Baltimore	Columbian Iron Works	Enlarged Works.
Baltimore	& Dry Dock Co.	
Baltimore	Foster, Knight & Co.	Manufacture Hats.
Baltimore	Berry & Simpson	Granite Yard.
Baltimore	National Advert'g Bureau	Printing, &c.
Baltimore	Campbell & Zell Co.	Machine Works.
Baltimore	Electrical Construc'n Co.	Electrical Works.
Baltimore	South Baito. Packing Co.	Packing House.
Baltimore	George Frank	Machine Shop.
Baltimore	Monumental Oil Refin. Co.	Paint & Oil Works.
Baltimore	J. Winslow Jones Co.	Canning Factory.
Baltimore	Chesapeake Improv. Co.	Packing House, &c.
Baltimore	Exchange Oyster Co.	Packing Houses.
Baltimore	Aurora Standard Heat &	Compound Factory.
Baltimore	Light Co.	Can Factory.
Baltimore	Reconverting Can Co.	Clothing Factory.
Baltimore	Strouse & Bros.	Factory.
Baltimore	Acme Manf'g Co.	Factory.
Beckleysville	Daniel Beckley	Paper Mill.
Ben's, D. C.	National Cap. Street Car	Machine Shop.
Berlin	S. H. Quillan, prest.	Creamery.
Catoctin Furn.	Catoctin Iron Co.	Repaired Furnace.
Cambridge	Balto. Oyster Pack'g Assn.	Oyster-packing House.
Conowingo	Samuel W. Wat. Pow.	Ad. Sulphite Mill.
Cumberland	Cumberland Cement Co.	Cement Mill.
Cumberland	H. B. Pratt	Mine Sand.
Cumberland	Whitman & West	Saw Mill.
Dorsey	Sollers Shoe Co.	Shoe Factory.
Frederick	Frederick Brush Factory	New Machinery.
Frederick	J. H. Ramsburg	Carriage Factory.
Frederick	J. H. Gambrell	Flour Mill.
Frederick	E. Cline & Co.	Rug & Carpet Factory.
Frederick	Potomac Bridge Works	Iron Bridge Works.
Frostburg	Frostburg Water Co.	Reservoir.
Green'd Mills	Anthony Zeitlinger	Remodel Flour Mill.
Greensboro	Plummer & Plummer	Printing Office.
Harve'd Grace	M. F. Wright and others	Flour Mill.
Howardville	W. T. Cox	Flour Mill.
Hyattstown		Gold Mine.
Laurel	Frank Miller	Flour Mill.
Leitersburg	Samuel Strite	Flour Mill.
Loaconing		Saw Mill.
Loaconing	David M. Evans	Saw Mill.
Mount Airy	A. O. Young & Co.	Flour Mill.
North East	Armstrong, Squires & Co.	Flour Mill.
Park Mill	J. Carmack	Flour Mill.
Perryville	Eureka Fertilizer Co.	Improved Works.
Principio Furn.	Geo. P. Whittaker Iron Co.	Fire Mining.
Rock Springs	Isaac Davis	Kaolin Mining.
Rockville		Gold Mine.
Rowlandville	Swisher Bros.	Creamery.
Salisbury	Salisbury Elec.-light Co.	Electric Plant.
Snow Hill	W. S. Wilson and others	Improve Electric Plant.
Snow Hill	Snow Hill E. L. & Pow. Co.	Electric-light Works.
Sparrow's Pt.	Pennsylvania Steel Co.	Electric Plant.
Sparrow's Pt.	Pennsylvania Steel Co.	Foundry.
Sparrow's Pt.	Pennsylvania Steel Co.	Pattern Shop.
Sparrow's Pt.	Pennsylvania Steel Co.	Pumping Plant.
St. Michaels	A. K. Easter	Remodel Flour Mill.
Taneytown	Zollicoffer Bros.	Flour Mill & Elec. Plant
Wash., D. C.	Wash. & Soldiers' Home	Electric Plant.
Wash., D. C.	Electric Railway Co.	
Wash., D. C.	Gibson Bros.	Printing Office.
Wash., D. C.	Roberts Projectile &	Projectile Factory.
Wash., D. C.	Manf'g Co.	
Wash., D. C.	American Ice Co.	Enlarge Factory.
Washington	Keeney Shoe Manf'g Co.	Shoe Factory.
Westernport	Gannon & Co.	Coal Mine.
Westernport	Proprietors Phoenix Mine	Coal Mine.
Weverton	U. Darby	Enlarged Flour Mill.
Williamsport	Steffey & Findlay	Flour Mill.
Wye Mills	Celia C. Davis	Creamery.

MISSISSIPPI.

Bogue Chitto	George S. Lacey	Saw Mill.
Bogue Chitto	Keystone Lumber Co.	Dr.-kilm.
Book Haven	Norwood & Butterfield Co.	Planing Mill.
Canton	State Farmer's Alliance	Bagging Factory.
Chatawa	Chatawa Gravel Co.	Gravel Mining.
Columbus	Conley & Curtis	Ice Factory.
Corinth	Corinth Wooden Mfg. Co.	Spoke Factory.
Corinth	W. H. Haynes	Saw Mill.
Durant	Durant Cream'ry, Cheese	Creamery & Ice Fac'y.
Ellisville	S. J. Johnson	Turpentine Distillery.
Gainesville	A. Poitevant	Floating Shingle Mill.
Greenville	Green, Elev'r & Wareh. Co.	Grain Elevator, &c.
Grenada	Gren. Oil & Compress Co.	Cotton Oil Mill.
Holly Springs	C. L. Merrell	Box Factory.
Holly Springs	R. S. Mosby	Printing.
Magnolia	C. C. Gibson	Saw & Planing Mill.
Marion Co.	J. J. White	Saw Mill.
Meridian	Queen City Carriage Co.	Carriage Factory.
Meridian	Mer. Comp's & Wareh. Co.	Cotton Compress.
Meridian	Meridian Gaslight Co.	Gas Works.

LOCATION.	NAME.	BUSINESS.
Meridian	Meridian Pot'y & Mfg. Co.	Ad. Bk. Tl. & Sewer P. Wks.
Meridian	Acme Lumber Co.	Lumber Mill.
Meridian	Meridian Sash & Bl'd Co.	Enlarged Factory.
Miss Point	Pascagoula Lumber Co.	Lumber Mill.
Natchez	Jas. A. Anderson	Printing, &c.
Nats	C. Burns	Saw Mill.
Rosedale	Charles Scott, prest.	Cotton Oil Mill.
Tunica County		Saw & Planing Mill.
Vicksburg	Hill City Oil Mills	Cotton Oil Mill.
Vicksburg	R. F. Beck	Brick Yard.
Vicksburg	Gibraltar Publishing Co.	Publishing.
Yazoo City	W. R. Coleman	Saw Mill.

NORTH CAROLINA.

Addie	J. A. Irvine and others	Clay Mines & Pottery.
Antioch	J. F. & D. M. McKay	Saw Mill.
Asheboro	Worth Lumber Co.	Wood-working Factory.
Asheville	French Broad Lumber Co.	Lumber Mill.
Asheville	Asheville Lumb. & Mfg. Co.	Lumber Mill, &c.
Asheville	W. E. Logan	Flour Mill.
Asheville	J. Gall, Jr.	Stone Quarries.
Asheville	Western Dressed Suf &	Cold Storage.
Best	W. T. Werner	Tannery.
Burgaw	J. B. Moore	Grist Mill & Gin.
Candor	C. C. Wade	Quarrying.
Charlotte	Mecklenburg Ice Co.	Doubled Factory.
Clinton	Carolina Veneer Works	Enlarge Works.
Clinton	E. T. Turlyton	Flour Mill.
Columbia	M. S. E. Couple	Flour Mill.
Concord	Canon Manf'g Co.	Cotton Factory.
Concord	Concord Manf'g Co.	Cotton Factory.
Concord	Cabarrus Wood & Iron Co.	Wood & Iron Works.
Concord	T. M. Rogers	Flour Mill.
Cranberry		Saw Mill.
Durham	J. S. Brown	Prize Tobacco Factory.
Durham	Blackwell's Durham Co.	Added Electric Plant.
Edenton	D. W. Raper	Grist Mill.
Elizabeth City	D. W. Raper	Grist Mill.
Elizabeth City	Eliz. City E. L. & Power Co.	Double Plant.
Elkin	Gwyn & Chatham	Woolen Mill.
Elmwood	Gilbert, Taylor & Co.	Another Saw Mill.
Enfield	A. S. Dunn & A. L. Hard	Saw Mill.
Faith	short	
Fayetteville	J. W. Frick Manf'g Co.	New Factory.
Fayetteville	Fayetteville Canning Co.	Canning Factory.
Fayetteville	Carolina Roller Mills &	Flour Mill.
Fayetteville	Supply Co.	
Fayetteville	Fayetteville Water Wks.	Water Works, &c.
Forestville	J. B. & S. W. Brewer	Paper Mill.
Golden	Golden Valley Hydraulic	Canal & Saw Mill.
Goldshoro	Mining Co.	Furniture Factory.
Goldshoro	Neuse Lumber Co.	Lumber Mill & Dry-k'n's.
Gibraltar	H. W. Williams	Flour Mill.
Greensboro	Eagle Foundry Co.	New Fdy. & Mach. Shop.
Greensboro	Greensboro Water Co.	Water Works.
Greensboro		Wagon Factory.
Greensboro		Car Works.
Greensboro	North Carolina Steel &	Furnace, Rolling Mill, &c.
Greensboro	Iron Co.	
Greensboro	Greensboro Paper Co.	Publishing.
Greensboro	D. W. C. Benbow	Cotton Mill & Elec. Plant.
Gregor	J. F. Prock	Cotton Gin.
Haliux	E. C. Pittman	Saw Mill.
Hartland	Bee Mountain Gold Mine	Increased Water Supply.
Hasty	H. C. Causey	Planing Mill.
Haywood	Campbell Delozier	Gold Mine.
Henderson	James Amos	Grist Mill.
Henderson	C. Lewis	Leaf Tobacco Factory.
Henderson	John D. Cooper	Leaf Tobacco Factory.
Henderson	George S. Pritchard	Leaf Tobacco Factory.
Henderson	D. V. Cooper	Leaf Tobacco Factory.
Henderson	Paine Clary	Prize Tobacco Factory.
Henderson	le. Henderson Coun. Pub. Co.	Publishing.
Hickory	Hickory Wood-work'g Co.	Wood-working Factory.
Hickory	Catawba Wood Works	Insulator Pin Factory.
Hickory	Kenner & Lake	Saw & Planing Mill.
High Point	Hammer & Teague	Flour & Grist Mill.
High Point	Empire Plaid Mills	Added Machinery.
High Point	Hammer & Teague	Saw Mill.
High Point	Johnson & Co.	Furniture Factory.
Hot Springs	N. J. Mayes and associates	Iron Mines.
Indian Trail	A. J. Williams	Gold Mine.
Jacksonville	Onslow Lumber Co.	Saw Mill.
Jacksonville	W. D. Harrison & Son	Saw Mill.
King's Moun't	Columbia Mining Co.	Mining, Furnaces.
Keyser	John A. Mills	Lumber Mill, &c.
Lincolnton	Samuel Lander	Printing.
Lincolnton	William Aderholdt	Flour Mill.
Littleton	G. H. Daniel	Saw & Grist Mill.
Louisburg	Egerton & Ford	Cotton Gin.
Louisburg	Egerton & Ford	Brick-yard.
Louisburg	Louisburg Contracting Co.	Tobacco Prize Houses.
Manchester	J. F. Clarke	Turpentine Distillery.
Manchester	Star Lumber Co.	Lumber Mill.
Manchester	J. F. Clark	Grist Mill.
Marion	P. J. Sinclair	Brick-yard.
Monbo	James Brown	Cotton Mill.
Monroe	Brewer Gold Mine	Additional Machinery.
Morgantown	Nor. Carolina Pottery Co.	Pottery.
Mount Holly	Mt. Holly Knitting Co.	Cotton Factory.
Mt. Airy	L. W. Ashby & Sons	Tobacco Factory.
Murphy	Kimsey Co.	Shingle Quarries.
Murphy	Dr. J. Wolf	Botting Works.
Murphy	Etowah Ochre & Tale Co.	Ochre & Tale Mines, &c.
Newbegun	C. L. Weeks	Saw Mill.
New Berne	James Redmond	Botting Works.
New Berne	A. H. Leftwich, prest.	Electric-light Plant.
New Berne	James W. Waters	Saw, Shing. & Gst. Mills.
Newton	Newton Spoke Co.	Dry-kilm.
Oxford	H. W. Kronheimer	Publishing.
Onslow County	J. W. Mills	Flour Mill.
Oxford	Robert Gregory	Prize Factory.
Oxford	Joseph Brown	Leaf Tobacco Factory.
Oxford	Bullock & Mitchell	Leaf Tobacco Factory.
Oxford	Oxford Orphan Asylum	Pants Factory.
Pates	J. C. Guerant & Co.	Saw, Plan. & Lath Mills.
Petra Mills	Eaton & Smith	Saw Mill.
Plymouth	L. McCarty	Shingle Mill.
Raleigh	Wetmore Shoe & Leath-	Increased Capital.
Raleigh	Leach & Andrews	Ice Factory.
Raleigh	George S. Lmrich	Plumbago Mines.
Randleman	Mr. Lee	Publishing.
Reidsville	Ellington Bros. & Wood-	Tobacco Factory.
Reidsville	ward	
Reidsville	W. J. Irvin	Paper-box Factory, &c.
Reidsville	A. H. Motley & Co.	Box Factory.
Reidsville		Water Works.
Rocky Mount	Kimsey Co.	Lumber Mill.
Rocky Mount	Rky. Mt. Prize House Co.	Two Prize Warehouses.
Rocky Mount	R. H. Bicks	Prize Warehouse.
Salem	F. & H. Fries	Grist Mill.
Salem Chapel	Stafford Bros.	Flour Mill.
Salisbury	J. T. Wyatt & Co.	Distillery.
Swansbor'gh	Pringle & Stevens Bros.	Saw & Planing Mill.
Swansbor'gh	Pringle & Stevens Bros.	Grist Mill & Gin.
Tarboro	Mayor and Council	Electric-Light Plant.
Taylorsville	Highland Buggy & Wag.	Added Machinery.
Uwharrie	T. Saunders	Gold Mine.
Walter	John F. Southerland	Cotton Gin.
Walter	R. E. Jones	Saw Mill.
Warsaw	T. L. Farson	Dry-kilm.
Watauga Coun.	C. H. Brown and others	Silver & Lead Mines.
Waynesville		Hub & Spoke Factory.
Waynesville	M. Rosemann	Pants Factory.
Wilmington	Porter Brewing Co.	Bottling Works, &c.
Wilmington	Wilmington Cotton Mills	Enlarged Mill.
Winston	Cicero Tise	Furniture Factory.
Winston	R. H. Hanes & Co.	Erect Larger Tob. Fac'y.

SOUTH CAROLINA.

LOCATION.	NAME.	BUSINESS.
Aiken	M. T. Holley, Jr.	Cotton Gin.
Anderson	McCully, Cathcart & Co.	Cotton Gin.
Anderson	Anderson Tan. & Shoe Fac. Co.	Tannery & Shoe Fac'y.
Anderson	R. F. Driver	Add. Iron Foundry.
Anderson	Anderson Water Wks. Co.	Water Works.
Berkley	Berkley Canning Co.	Canning Factory.
Blacksburg		Found. & Mch. Works.
Blacksburg	Blacks. St. Ry. & E. L. Co.	Electric Plant, &c.
Bonneau's Dep.	Weber & Davis	Saw Mill.
Carmichael	Luther Carmichael	Saw Mill, &c.
Charleston	Charleston Water Wks. Co.	Extend Main.
Charleston	Valk & Murdoch Iron Wks.	Enlarged Works.
Charleston	Palmetto Brewing Co.	Refrigerating Plant.
Charleston	Zero Ice & Cold Storage Co.	Ice Factory, &c.
Charleston	Char. E. L. & Power Co.	Enlarge Plant.
Charleston	S. C. Nat'l Construction &	Ship-yard.
Charleston	Ship Owners' Ass'n	
Charleston	Charl'n Mattress Mfg. Co.	Mattress Factory.
Cheraw	E. A. Palmer and others	Woodworking Factory.
Clifton	W. C. Allen	Publishing.
Columbia	S. C. Min. & Mfg. Co.	Pottery, Kaolin Min., &c.
Cummings	W. T. Cummings	Saw Mill.
Darlington	C. W. Hewett	Carriage Factory.
Darlington	Darlington Manf'g Co.	Cotton Mill.
Dillon	Dil. Cost. seed Oil Mill	Cost Add Fertilizer Factory.
Due West	Due West Publishing Co.	Printing, &c.
Ellore	W. Wallace	Furniture Factory.
Fort Motte	Congaree Lum. & Ven'r Co.	Dr.-kilm.
Florence	Prince & Starr	Printing Office.
Florence	Florence Cotton Oil Co.	Add. Fert. & Soap Fac'y.
Gaffney City	S. Simon	Hoop Factory.
Greenville	Beard, Long & Co.	Machine Shops.
Greenville	R. Porter Brewing Co.	Bottling Works.
Greenville	Dr. Simpson	Tannery.
Hawthorne	A. J. Heath	Cotton Gin.
Keowee	J. Mitchell & G. Wanner	Saw Mills, Lum. Boom, &c.
Lexington	Red Bank Mills	Cotton Mill.
Marion	E. McDuffie	Enlarged Mch. Shop.
Mt. Pleasant	J. H. Schultz	Grist Mill.
Mt. Pleasant	E. O. Hall	Saw Mill.
Mt. Pleasant	Berkley Canning & Mfg. Co.	Crate, Can. & Can'g Fac.
Piedmont	J. C. Stribling	Creamery.
Picken's	J. C. Griffin	Flour Mill.
Picken's	Hutchins & Co.	Cotton Gin.
Roberts	F. M. Morris & Co.	Cotton Gin.
Selvern	Zimri Gunter	Saw Mill.
Spartansburg	Beaumont Manf'g Co.	Rope & Twine Factory.
Spartansburg	Whitney Manf'g Co.	Enlarged Cotton Mill.
Wagner	J. A. Gunter	Cotton Gin.
Yorkville	J. A. Gunter	Grist Mill.
Yorkville	York Spoke & Handle Co.	Spoke & Handle Factory.

TENNESSEE.

Adolphus	Cook & Pickle	Added Flour Mill.
Athens	Athens Planing Mill	Enlarged Mill.
Bartonsville	Parkinson & Sloan	Cotton Gin.
Bacchus	J. D. Mayes	Saw Mill.
Big Spring	Thomas Arrants	Remodeled Flour Mill.
Bristol	Doe Mountain Iron Co.	Iron Mines.
Bristol	Bristol Iron & Steel Co.	Iron Furnace.
Bolivar	Gardner Bros.	Stave Factory.
Bradford	J. E. Beck & Co.	Saw Mill.
Brownsville	C. Ulmsted and	Saw Mill.
Brownsville	Id. Barcroft & Du	Saw Mill.
Bryson	J. B. Morrel	Flour Mill.
Buckeye	The Pioneer Cl. & Ck. Co.	Coal Mines & Ck. Ovens.
Camden	James R. Hudson	Flour Mill.
Carter's Depot	Watauga Boom & Lum. Co.	Lumber Mill & Boom.
Centerville	John M. Graham	Flour Mill.
Chattanooga	Thom. Hous. Elec. Co.	Electric Plant.
Chattanooga	Alsh & Werner	Boiler Works.
Chattanooga	Montague & Co.	Fire Brick Works.
Chattanooga	Murray Infal. Sys. Ton. Co.	Medicine Factory.
Chattanooga	Snodgrass & Field	Enlarged Saw Mill.
Chattanooga	H. C. Smith	Publishing.
Chattanooga	Southern Iron Co.	Basic Steel Works, &c.
Chattanooga	Scholtze Bros	Fertilizer Works.
Chattanooga	Chatta. Wagon Mfg. Co.	Wagon Factory.
Chattanooga	Hughes Lumber Co.	Planing Mill.
Chattanooga	Foster & Daugherty	Iron Fence Factory.
Chattanooga	R. C. Spence & J. B. Dowden	Small Steel Plant.

LOCATION.	NAME.	BUSINESS.	LOCATION.	NAME.	BUSINESS.	LOCATION.	NAME.	BUSINESS.
Knoxville.....	Knoxville Ice Co.....	Enlarge Ice Factory.	Henderson.....	J. F. Dawson and others.....	Fire-brick & Tile Works.	Roanoke.....	Roanoke Iron Co.....	Iron Furnace.
Knoxville.....	Knoxville Iron Co.....	Improved Works.	Henrietta.....	A. K. Swann & associates.....	Canning & Evap. Fact'y.	Roanoke.....	Roanoke Machine Wks.....	Enlarged Works.
Knoxville.....	United Coal Co.....	Mining.	Hillsboro.....	Schuyler & Crumley.....	Cotton Gin.	Roanoke.....	Roanoke Engine & Mch. Co.	Engine Works.
Knoxville.....	E. Woltman, representing.....	Water Works.	Hillsboro.....	.....	Flour Mill.	Roanoke.....	American Bridge & Iron Co.	Add. Iron Fndy., &c.
Knoxville.....	Helman & Gunn.....	Soap Factory.	Houston.....	Houston Ice Co.....	To Enlarge Ice Factory.	Roanoke.....	Old Dominion Phonog. Co.	Phonographs.
Knoxville.....	J. M. Ross & Co.....	Marble Quarries.	Houston.....	E. E. Porter.....	Barrel & Cistern Factory.	Roanoke.....	William Welch.....	Flour Mines.
Lake County.....	Beck & Dickerson.....	Saw Mill.	Houston.....	Houston Novelty Mfg. Co.	Manufact. Novelties.	Roanoke.....	Roanoke Gas & Water Co.	Gas Works.
Lane (near).....	Callan & Co.....	Saw Mill.	Houston.....	James A. Cushman.....	1 Mach. Sh. & St. Wks. Ad.	Roanoke.....	Va. Brewing Co.....	Brewery.
Lawrenceburg, Mr. Sharp.....	.....	Iron Mine.	Houston (near).....	Millage & Calhoun.....	Saw Mill.	Ronald.....	Va. Lime & Cement Co.	Cooper Shop.
Loudon.....	J. A. Ferguson & T. Robins'n	Mch. Shp. & Foundry.	Houston.....	Mr. Beaumister.....	Trunk Factory.	Salem.....	Scull, Tubbs & Hoffman.....	Terra-Cotta Works.
Memphis.....	Bell Manfg. Co.....	Planing Mill.	LaGrange.....	LaGrange Water Wks. & E.	Wtr. Wks. & Elec. Plant.	Salem.....	Salem Furnace Co.....	Iron Furnace & Mines.
Memphis.....	Mem. One-stave Barrel, & En-	Increased Capital & En-	Laredo.....	Laredo Water Co.....	Enlarge Plant.	Salem.....	Salem Folding Chair Co.	Chair Factory.
Memphis.....	J. H. Anthony.....	Enlarge Lumber Mill.	Laredo.....	.....	Brick Works.	Salem.....	O. D. Oakley.....	Iron Works.
Memphis.....	Pittsburg Coal Co.....	.....	Laredo.....	.....	Ice, Can'g & Evap. Fac's.	Salem.....	George E. Hayes.....	Brick Yard.
Memphis.....	Citizens' St. Railway Co.....	Electric Plant.	Laredo.....	Laredo Improvement Co.	Electric Plant.	Sands.....	W. T. G. Snyder.....	Flour Mill.
Memphis.....	Memphis Elec. Ry. Co.....	Electric Plant.	Laredo.....	Laredo Fdry. & Mch. Co.	Foundry & Mch. Wks.	Scotland.....	Surry Lumber Co.....	Saw Mill.
Memphis.....	Cochran Lumber Co.....	Flumber Mills.	Malakoff.....	Mr. Caloway.....	Silver Mine.	So. Boston.....	So. Bos. Sm. & Tob. Co.	Tobacco Factory.
Memphis.....	Faith Cotton-seed Oil Mills.....	Add. Cotton Ginney.	Marshall.....	W. P. Hudgins.....	Printing Office.	Staunton.....	N. V. Mining & Cons. Co.	Coal & Iron Mines.
Memphis.....	Democrat Publo.....	Printing, &c.	Meridian.....	Bosque River Wat. Mill Co.	Mill.	Suffolk.....	Edwards & Co.....	Mattress Factory.
Memphis.....	The Stratton Co.....	Lumbering.	McKinney.....	McKinney Elec. light Co.	Electric Plant.	Suffolk.....	Gay Mfg. Co.....	Electric Plant.
Memphis.....	J. M. Keating.....	Publishing, &c.	Mobile.....	Allen & Co.....	Add. Lath Mill.	Suffolk.....	Southern Lumber Co.	Electric Plant.
Milan.....	White & Keaton.....	Cotton Gin.	Morgan.....	James Moorhead.....	Water Works.	Suffolk.....	J. P. Kernode.....	Publishing.
Moltke.....	Moltke Mer. & Mining Co.	Mining, &c.	Morgan.....	James Moorhead.....	Ice factory.	Vicar's Switch, Plunkett, Kinzer & Schaeffer	.....	Lime Works.
Monroe County.....	Helding Lumber Co.....	.....	Morgan.....	M. A. Skidmore and others.....	Planing Mill.	Waynesboro.....	Land Co.....	Mining, &c.
Montvale.....	Sims & Birks.....	Develop Iron Mine.	New Birm'ham G. R. McDonald	.....	Planing Mill.	Waynesboro.....	Herman Iron Co.....	Mining.
Morgan County.....	Cumberland Coal Min. Co.	Coal Mines.	Panna Maria.....	J. A. Lorenz.....	Cotton Gin.	Windsor Stat'n Mitchell & Steel	.....	Saw Mill & Dry-kiln.
Morristown.....	T. C. Cain & Son.....	Wagon Factory.	Paris.....	Times Publishing Co.....	Publishing.	Wytheville.....	R. K. Shores.....	Saw & Grist Mill.
Morristown.....	Samuel Sullenberger.....	Coffin Factory.	Pecos City.....	Isabella Irrigation Co.....	Irrigation.	Weir's Cave.....	J. W. Cline & Co.	Flour Mill.
Morristown.....	South. Coal, Iron & R.R. Co.	Iron & Steel Works.	Pilot Point.....	Pilot Point Canning Co.	Canning Factory.	Waynesboro.....	Mr. Bibb.....	Publishing.
Mouse Creek.....	J. Collins & others.....	Planing Mill.	Pecos City.....	N. Van Horne & J. C. Bayne	Publishing.	Wythe County.....	Betha Zinc Co.....	Zinc Works.
Mouse Creek.....	S. P. Blair.....	Tannery.	Queen City.....	Queen City Iron Mining	Iron Furnace.	Wytheville.....	Wyeth, El. Pow. & Imp. Co.	Factory.
Mouse Creek.....	W. L. Rice.....	Flour & Corn Mill.	San Antonio.....	George Dulling.....	Gas Wells.			
Murfreesboro.....	Mayor & Council.....	Electric Plant.	San Antonio.....	Lone Star Brewing Co.....	Enlarge Brewery.			
Murfreesboro.....	J. E. Thompson.....	Enlarge Water Works.	San Antonio.....	San Antonio Stock Yards.....	Stock Yards.			
Murfreesboro.....	Murfreesboro Red Cedar	Saw Mill.	San Antonio.....	San Antonio Elec. Lt. Co.	Electric Plant.			
Nashville.....	Adams & Price Locom. Wks.	Add. Machinery.	Santa Anna.....	Choctaw Coal & Iron Co.	Coal Lands.			
Nashville.....	Microcode Medicine Co.	Medicine Factory.	Santa Anna.....	Rogan & Lamberson.....	Flour Mill.			
Nashville.....	John B. Ransom & Co.	Planing Mill.	Saunders.....	J. H. Fleming & Sons.....	Flumber Mill.			
Nashville.....	Singleton Bros.....	Shoe Factory.	Shafter.....	Col. Smith.....	Gold Mining.			
Nashville.....	American Mill Co.....	Flour Mill & Elevator.	Shafter.....	John Ross.....	Gold Mining.			
Nashville.....	Autom. Refrigerating Co.	.....	Shafter.....	R. Wright.....	Gold Mining.			
Nashville.....	Parker & Potter.....	Publishing.	Sherman (near).....	.....	Coal Mines.			
Neely.....	J. R. Campbell.....	Grist Mill & Gin.	Stephenville.....	City Mills.....	Enlarge Flour Mill.			
Nettle Carrier C. Keisling & L. Winton	.....	Saw Mill.	Stephenville.....	Joel Fisher.....	Flour Mill.			
Obion.....	John Vogue.....	Saw Mill.	Summit.....	Williams Bros.....	Flumber Mill.			
Obion.....	Halstead & Price.....	Saw Mill.	Tyler.....	Warren Lumber Co.....	Dry-kiln.			
Oliver Springs.....	E. A. Reed.....	Saw Mill, &c.	Tyler.....	H. C. Havenkott.....	Furniture Factory.			
Oliver Springs.....	Indian Creek Co.....	Coal Mines.	West.....	Martin Bros.....	Cotton Gin.			
Paint Rock.....	Paint Rock Coal & Coke Co.	Mining, Coke, &c.	Yoakum.....	San Antonio & Aransas	Machine Shop.			
Pinewood.....	S. L. Graham & Son.....	Cotton Factory.		Pass R. R. Co.....	.....		
Pleasant Pt.....	D. E. Quinley.....	Saw Mill.						
Pulaski.....	M. T. Abernathy & others.....	Saw & Grist Mill & Gin.						
Rhea Springs.....	James Howe.....	Remodel Flour Mill.						
Ringgold.....	A. Massie.....	Saw Mill.						
Rives.....	E. B. Chester.....	Saw Mill.						
Rockwood.....	J. Brown.....	Mining.						
Rogersville.....	E. M. Spears.....	Flour Mill.						
Saunders.....	J. T. Low.....	Cotton Gin.						
Sherman Hgts.....	W. A. Woolson.....	Wagon Shop.						
Sherman Hgts.....	Macary & Igo.....	Limestone Quarry.						
Sparta.....	Benton McMillan & D. L.	Paper Mill.						
Sparta.....	Snodgrass.....	.....					
S. Pittsburg.....	S. Pittsburg Pipe Works.....	Hoe & Tool Works.						
S. Pittsburg.....	Hallums, Electric Light Co.	Add. Incandescent Plant.						
Springfield.....	Hallums & Bros.....	Tobacco Factory.						
Spring Creek.....	D. H. & J. D. King.....	Distillery.						
Ten-Mile St'd.....	E. F. Sharp.....	Woodworking Factory.						
Trenton.....	E. E. Benton.....	Publishing.						
Union City.....	Union City Roller Mill Co.	New Flour Mill.						
Watertown.....	Bryan, Wood & Heal.....	Flour Mill.						
Winchester.....	Ten & A. L. D. Min. & Ry. Co.	Mining, &c.						
Winchester.....	Franklin Co. Farm, Allia.....	Flour Mill.						
Yorkville.....	Wheeler Roller Mill Co.	Flour Mill.						

VIRGINIA.

WEST VIRGINIA.

Addison.....	Addison Boom Co.....	Lumbering.
Addison.....	Webster County Boom Co.....	Lumbering.
Alderson.....	H. H. Andrew.....	Printing, &c.
Alderson.....	Boyd & Ferguson.....	Publishing.
Ansted.....	Sauley Mt. Coal Min'g Co.....	Coal Mines.
Belmont.....	McCullough & Co.....	Oil Wells.
Belmont.....	Ogle, Howes & Reeder.....	Oil Wells.
Belmont.....	R. Hammatt.....	Oil Wells.
Belmont.....	John Hammatt.....	Oil Wells.
Belmont.....	William Johnson.....	Oil Wells.
Belmont.....	Duncan Oil Co.....	Oil Wells.
Belmont.....	Mildren Bros.....	Oil Wells.
Belmont.....	J. J. Huggin.....	Oil Wells.
Belmont.....	Dennis O'Brien.....	Oil Wells.
Belmont.....	Boyle, Dye & Co.....	Oil Wells.
Belmont.....	Captain Newton.....	Oil Wells.
Belmont.....	McCullough & Kernes.....	Oil Wells.
Belmont.....	Huggin, Brown & Davidson.....	Oil Wells.
Benwood.....	Riverside Iron Works.....	Add Sheet Iron Mill.
Bethany.....	Elk & Sugar Crk. Boom Co.....	Oil Wells.
Buchanan.....	Elk & Sugar Crk. Boom Co.....	Lumbering, &c.
Buckannon.....	Alexander Room & Lum. Co.....	Saw Mill.
Burning Spgs.....	Thomas O'Brien.....	Coal Mines.
Calhoun Co.....	Baker & Co.....	Develop Timber Lands.
Charleston.....	Charleston Dry Dock Co.....	Dry Dock.
Charleston.....	Roy Furniture Co.....	Furniture Factory.
Charleston.....	F. W. Schwamb Lumb. Co.....	Lumber Mill.
Charleston.....	W. Leonard & E. Spring.....	Coal Mine.
Charleston.....	H. D. Rulmer.....	Saw Mill.
Charleston.....	Jefferson Lum. & Mfg. Co.....	Lumbering.
Charlottesville.....	M. M. Bradford.....	Wood-working Factory.
Clarkburg.....	John Maurice.....	Coal Mines.
Coal Valley.....	M. T. Davis.....	Coal Mining.
Colfax.....	Marion Improvement Co.....	Oil Wells.
Davis.....	Crystal Lime & Mining Co.....	Lime Works.
Elizabeth.....	Philadelphia parties.....	Oil Well.
Ellenborough.....	D. A. Sprinkle.....	Saw Mill.
Fairmont.....	Union Improvement Co.....	Natural Gas Works.
Fairmont.....	Gaston Coal & Coke Wks.....	Coke Ovens.
Grafton.....	Union Improvement Co.....	Natural Gas Works.
Grafton.....	Grafton Natural Gas Co.....	Natural Gas.
Hebron.....	J. G. George.....	Oil Wells.
Hinton.....	R. R. Flanagan, mangr.....	Stone Quarries & Mill.
Huntington.....	N. N. W. & Miss. Val. R. R. Co.....	Machine Shops.
Hunting'n (nr) T. Wilkes.....	.....	Coal Mines.
Keyser.....	Keyser Elec.-Lt. & Pow'r Co.....	Electric Plant.
Keyser.....	G. S. Frederick.....	Flour & Corn Mill.
Mannington.....	A. J. Montgomery.....	Oil Wells & Tanks.
Mannington.....	South Penn Co.....	Oil Wells.
Mannington.....	Ira Dewitt.....	Oil Wells.
Mannington.....	Gibson & Co.....	Oil Wells.
Mannington.....	F. M. Jackson & Co.....	Oil Wells.
Mannington.....	Hukill & Scott.....	Oil Well.
Mannington.....	Wesley Webber.....	Oil Well.
Mannington.....	Burt & Son.....	Oil Well.
Martinsburg.....	C. Kimberland.....	Dev. Coal, Oil & Tim. Lds.
Martinsburg.....	T. M. Jones & Co.....	Develop Coal Lands.
Martinsburg.....	Electric Illuminating Co.....	Electric Plant.
Mohler's.....	.....	Marble Mill.
Molers.....	Wash. Building Lime Co.....	Lime Works.
Morgantown.....	Alexander Oil Co.....	Oil Wells.
Moundville.....	.....	Electric-light Works.
New Cumb'nd.....	Plattenden & Son.....	Publishing.
New Cumb'nd.....	.....	Brick-yard.
New Cumb'nd.....	N. Cum. Lt. Ht. & Pow. Co.....	Electric Plant.
New Cumb'nd.....	S. George and others.....	Glass Works.
Opekiska.....	Hutchinson Coal & Ck. Co.....	Coal Mines & Ck. Ov'ns.
Pack's Ferry.....	.....	Saw Mill.
Parkersburg.....	O. S. McKinney.....	Publishing.
Parkersburg.....	William Kirk.....	Corn & Feed Mill.
Parkersburg.....	Julius Baker & Co.....	Canning Factory.
Parkersburg.....	Parkersburg Brew'g Co.....	Add. Keg Factory.
Parkersburg.....	W. N. Chancellor & others.....	Furniture Factory.
Parkersburg.....	John Daniels.....	Brick-yard.
Parkersburg.....	Logan Carriage Co.....	Enlarge Factory.
Parsons.....	Mess. Wagoner & Heuser.....	Saw Mill.
Piedmont.....	Piedmont Elec.-light Co.....	Enlarge El'ctric Plant.
Pleasant Val'y.....	J. W. Chambers.....	Grist Mill.
Pruntytown.....	.....	Oil Wells.
Quinnimont.....	Hutchinson Bros.....	Coke Ovens.
Ritchie C. H.....	W. Kincaid & J. Buzzard.....	Saw Mill.
Ritchie C. H.....	A. G. McDougall.....	Oil Well.
Ritchie C. H.....	McDonald & Daly.....	Bed-spring Factory.
Rowlesburg.....	.....	Saw Mill.
Rowlesburg.....	Holland, McQuay & Doel.....	Lumbering.
Rowlesburg.....	Jer Lumber Co.....	Lumbering.
Rowlesburg.....	Brier Mountain Lum. Co.....	Lumbering.
Rowlesburg.....	S. Hinkle & Co.....	Lumber Mill.
Shepherdsto'n.....	D. S. Rentch.....	Mattress Factory.
Shimston.....	.....	Gas Wells.
Sutton.....	Geo. W. Curtin.....	Saw Mills (g).
Wellburg.....	Nichols & Mays.....	Brick-yard.
Wellburg.....	Riverside Glass Co.....	Gas Well.
Wellburg.....	George Given.....	Gas Well.
Weston.....	Weston Elec.-light, Pow'r.....	Electric Plant.
Weston.....	.....	Water Co.
Weston.....	Weston Brick & Tile Fact.....	Brick & Tile Works.
Weston.....	W. J. Kitson.....	Sash & Door Factory.
Wheeling.....	The Fleming Oil & Gas Co.....	Oil & Gas.
Wheeling.....	N. Orleans Coal Co.....	Coal Mining.
Wheeling.....	Panhandle Coal & Iron Co.....	Mining, &c.
Wheeling.....	Flaccuse Bros.....	Canning Factory.
Wheeling.....	Wheel'g Sign & Mirror Co.....	Signs & Mirrors.
Wheeling.....	West Virginia China Co.....	Enlarge Pottery.
Wheeling.....	George Sleight & Co.....	Basket Pottery.
Wheeling.....	Charles J. Elig & Co.....	Carriage Factory.
Wheeling.....	Riverside Iron Works.....	Gas Furnace.
Wheeling.....	Hobbs Glass Works.....	Glass Works.
Wheeling.....	Schnulbach Brewing Co.....	Ice Factory.
Wheeling.....	Beird Bros.....	Machine Shop.
Winfield.....	C. E. Hatch.....	Oil Well.
Williamstown.....	Benjamin Lowery.....	Planing Mill.
Williamsburg.....	W. H. Wyatt.....	Saw Mill.
Wirt County.....	Robert Frazier.....	Saw Mill.
Woodlands.....	A. Suter & Bros.....	Flour Mill.

NORTH CAROLINA ORES.

Their Quality and Quantity.

HEADQUARTERS
MANUFACTURERS' RECORD'S
EXPLORING EXPEDITION.
IN THE NORTH CAROLINA MOUNTAINS,
December 15, 1889.

In considering the iron resources of North Carolina it is interesting to remember that iron ores of North Carolina manufacture were popular articles commanding a considerable market in New York and Boston years before the War of the American Revolution. As early as 1728 small exports of pig and bar iron were made to England, and when the Revolution started there were a number of iron furnaces in the Colony. The leading representatives of the industry were located on the Cape Fear, Yadkin and Dan rivers. The old Vesuvius furnace, on Anderson's Creek in Lincoln County, built in 1780, was in operation up to the year 1873. There were a number of furnaces but more bloomeries scattered over the iron districts, but the interest declined before the Civil War, which, however, witnessed the erection of two new furnaces, while two more were built after the war. But most of the old plants were fitted to conditions no longer existent, and the real revival of North Carolina's iron and steel industry has started at a very recent point.

The great current activity in the mineral districts of Kentucky, Tennessee and North Carolina will speedily furnish all the conditions necessary to make the last named the center of an important iron mining and manufacturing industry. The superior coking coals of the Flat Top and Elkhorn basins lie at the door of North Carolina, while its own coal resources are not to be considered indifferently. As for iron ores the North State has the whole series from the Azoic to the bog ores of the Quaternary. When, to these favorable items, we add all the advantages of climate and position in relation to markets, including command of sea and land carriage for products, it must be concluded that the Commonwealth is likely to become a leading one among the circle of industrial Southern States.

Regarding the bog ores of the Eastern portion of the State, they have been worked successfully in a small way, like the limonites of Eastern Kentucky. In Kerr's report (1875) a number of interesting analyses of these ores are given, from which the following example is taken:

Silica.....	7.39
Oxide of iron.....	77.93
Sulphur.....	0.05
Phosphorus.....	0.02 giving
Metallic iron.....	53.93

Still pretty well East but on the northern tier of counties, we strike the hematite ore in Halifax and Granville counties. Kerr says: "The ore is granular, for the most part, and of the variety known as specular, but contains a considerable percentage of magnetic grains disseminated through it. On the South side of the river, the bed has been exposed for several rods on the upper slope of the hill at an elevation of about 100 to 150 feet above the surface of the water. The ore is generally slaty, impregnating and replacing the argillaceous, quartzitic and chloritic strata which constitute the Huronian formation at the locality. This lower bed is double, another parallel outcrop appearing at the distance of about 100 yards. The strike is North 20° East, and the dip Eastward 80°. The principal bed is about 20 inches thick at the surface." The analyses of these beds are appended, No. 3 representing the upper and No. 4 the lower bed:

Silica.....	3	4
Alumina.....	9.10	10.12
Oxide of iron.....	6.15	.....
Lime.....	83.96	.....
Phosphorus.....	0.22	.....
Sulphur.....	0.00	0.05
Metallic iron.....	0.03	0.08
	58.73	53.31

It would really fill pages to attempt any complete description of the widely distributed and various ores of North Carolina. As we shall presently examine and report on them by districts, it is sufficient to clear the ground by some notice of a few characteristic ores and beds, with scientific data enough to give the reader an intelligent idea of this wonderful country. * * * One of the most interesting deposits of the region will be found at what is known as the Buckhorn mine, in Chatham county on the borders of Harnett. The formation occurs as a bed 200 feet above the Cape Fear river. "The lower portions of the bed, which contains much manganese and less iron in proportion, is of a mottled grey and dull reddish color at the summit, and at the distance of two or three hundred yards along the slope, is a light colored and grey spotted ferriferous manganesean slate."

Dr. Kerr regards this ore as very like in character to the ores of Iron Mountain, and thinks that its extent and mode of occurrence strongly suggest the Pilot Knob. "It is equal to either of these notable iron ore deposits in quantity, and is equally pure, and has the advantage of both in the presence of large percentages of manganese, and the capacity to produce *spiegel-eisen* without admixture of other ores." The conditions which render this deposit of interest and value. There are others presenting like conditions which we shall hear about later.

As early as 1875 the American Iron & Steel Co. had expended a large sum of money in improving the navigation of the Cape Fear river, in developing the Buckhorn and neighboring properties, erecting plant, etc. Analyses by Mr. G. G. Lobdell and Mr. C. E. Buck, and by the chemist of the Pennsylvania Steel Co. give the following:

	8	9	10	11	12
Silica.....	14.45	5.65	12.80	30.50	7.50
Alumina.....	0.50	0.50	5.30	19.20	8.49
Ox. of man.....	trace	trace	22.80	7.52	7.52
Phosphorus.....	trace	trace	0.02	0.04	0.04
Sulphur.....	0.06	trace	0.03	0.03	0.02
Iron.....	56.70	66.50	54.15	18.41	55.00

Near Haywood and the junction of the Haw and Deep rivers, Kerr reports a red ochreous ore somewhat resembling the Clinton ores of New York. The two analyses published give metallic iron 49.56 and 47.25. At Chapel Hill an ore bank of "dense steel grey hematite (specular in part)" is of interest on account of the extent of the deposit and the purity of the ore. The analysis is:

Silica.....	2.53
Alumina.....	1.68
Protoxide of iron.....	2.45
Sesquioxide of iron.....	91.24
Oxide of manganese.....	0.34
Lime.....	0.56
Magnesia.....	0.00
Phosphoric acid.....	0.04
Sulphur.....	0.11
Metallic iron.....	65.77

The foregoing will serve to indicate the sort of stuff we have to feed on in North Carolina. I have not attempted any comprehensive mention of the many counties and localities deserving attention for their mineral wealth, advantages, and so on, reserving that for the future. The magnitude of the subject grows the closer we approach it.

GOLDSMITH BERNARD WEST.

THE "Special Banker's Edition" of the Baltimore MANUFACTURERS' RECORD contains a lengthy review of the South's growth and prospects, the aim being to present to every bank and financial institution in the United States facts and figures to prove what the South has accomplished and what its future promises to be. It is a number of great interest, both in the way of suggestion and information.—Washington Post.

A TIMELY VOLUME.—J. S. Ogilvie, 57 Rose street, New York, publish the life and death of Jefferson Davis. The book gives complete details as to the life and career of the ex-President of the Confederacy, and will likely prove a popular publication.

"ORE HILL."

The Beginning of North Carolina's Iron and Steel Development.

[Spec. correspondence MANUFACTURERS' RECORD.]
SALISBURY, N. C., Dec. 20, 1889.

There is a gentleman in this city, Samuel H. Wiley, Esq., president of the Davis & Wiley Bank, to whom all the inhabitants of North Carolina ought to be under great obligations, for to him is largely due the credit for the founding of the North Carolina Steel & Iron Co., of the organization of which a full report was given in the MANUFACTURERS' RECORD early this month.

The active working up of this enterprise was done, I believe, by Mr. J. J. Newman, an accomplished mining engineer, who is vice-president and general manager of the company; and he likewise has rendered the whole State a signal service in leading the way for the development of its vast iron resources. But it was of Mr. Wiley's efforts to secure the magnificent ore property on which this enterprise is based, and his determination during many years to begin work on it as soon as railroad facilities would justify it that I started to write.

There is a true story concerning this energetic gentleman which has never been published that is worthy of record, for it conveys an encouraging and useful lesson.

In his youth, when Mr. Wiley was struggling to make a place for himself in the world, he, by a singular chain of circumstances, was thrown into intimate personal relations with Dr. Emmons, the eminent scientist, who was then the geologist of this State, and this friendship continued as long as the latter lived. In the early days of their acquaintance, Dr. Emmons told Mr. Wiley that the two best iron ore banks he had ever seen were those of Cranberry and Ore Hill. The young man made up his mind that he would some day own them. Many times he visited both properties during the years he was accumulating the money required for their purchase, and finally he accomplished his long cherished purpose. Soon after the war he sold out his interest in the first to some of the parties now operating there, but he held on to Ore Hill, because he felt sure that the time was coming when railroad transportation would be provided and its value would be greatly enhanced. After the Cape Fear & Yadkin Valley Road was built and the certainty of a coal or coke supply at low prices was assured, he saw that the time for which he had waited many years had arrived, and he at once set to work and succeeded in organizing the strong company that is to build extensive iron and steel works at Greensboro.

Ore Hill has its history also. During the American Revolution charcoal iron was made there and for sometime afterwards. When the Confederate government needed iron it obtained a considerable supply from there, and finally, after having had the hill carefully examined by an expert, it decided to build large furnaces, a foundry and various work shops there. This work was well under way when the war ended. The foundations of one of these furnaces, built of massive stone, remains to demonstrate the magnitude of the contemplated work.

The owners of this property have men employed in prospecting. Within a few days two new veins have been discovered, and the probabilities are that all that Dr. Emmons said in his official reports of the richness and quantity of ore of this extensive deposit will be surpassed by the facts revealed when the prospectors have finished their work.

A number of furnace men and capitalists as well as mining experts have recently visited Ore Hill and the adjacent ore properties, and afterwards have come here to confer with Mr. Wiley respecting the

prospects and plans of his company, and to negotiate terms for their active participation in its affairs.

Numerous letters have been received from all parts of the country that attest the wide circulation and great influence of the MANUFACTURERS' RECORD, through whose announcements most of these correspondents first heard of this great North Carolina enterprise.

WANTED—A RAILROAD FROM THE SEA.

A Neglected Southern Harbor—The Best Port South of Hampton Roads—Pensacola.

Editor Manufacturers' Record:

In your interesting editorial (Nov. 10) on the Increase of Foreign Trade at Southern Ports, you say: "The whole Southwest is bent upon the building up of one or more great ports on the Gulf coast of Texas, and a private company is now vigorously at work constructing a deep-water harbor at the mouth of the Brazos river. * * Brunswick, Ga., is being pushed vigorously to the front. * * Far-seeing men realize that the South is to become as noted for its foreign commerce as for its manufactures."

The writer believes this language is abundantly justified by the possibilities which the natural situation presents, taken in connection with the enormous surplus of manufactured goods which the South is likely soon to have at the doors of her manufactories ready for shipment. Your columns as well as those of the local press everywhere throughout the South for months have teemed with accounts of new manufacturing enterprises in every part of the Southern States. In this enormous increase of industrial establishments in this section the intelligent reader could not fail to note that the South's manufacturing facilities must soon result in an output of goods far beyond the demand of the home market. It is therefore not surprising that the Southern railways run with full freights to the interior and that the available shipping points on the coast are vastly increasing their business. But the increase of foreign trade has but just begun, even if the present manufactories alone are continued in operation, to say nothing of the constantly increasing number of plants which are being erected week by week. Hundreds of new establishments are now just getting the wheels greased and the joints running smoothly for work. Soon every industrial town—of which there are scores—will have goods piling up on the factory shelves, and the store-houses and freight-houses will be bursting full of products awaiting transportation, unless the facilities for shipment shall be increased in equal ratio with the production of articles for shipment.

The writer has had exceptional opportunities for ascertaining the capacities and advantages for shipping of every port on our coasts and affirms whereof he knows in asserting that the very best port south of those about Norfolk is now practically cut off as a shipping point for general products by the lack of sufficient railway connections. Hundreds of thousands have been spent for improving the harbor and terminal facilities at Brunswick; millions have been lavished upon the harbor at Galveston; millions at Mobile; at the mouth of the Brazos a million will be spent by a private corporation to construct a harbor; yet at Pensacola, Fla., is found already at hand, constructed by nature, costing not a dollar to maintain, a simply magnificent harbor. It is spacious enough to float the whole commerce of the South; it is completely landlocked, and secure in all weather; it has great depth of water close up to the city's docks. Moreover, it has a wide area of good anchorage for all classes and sizes of vessels, with excellent holding ground. The islands and shoals,

which enclose the harbor on the Gulf side, were formed centuries ago, and the rivers which debase into the bay discharge their waters so far up as to deposit the silt thirty miles from the harbor proper. The tidal scour in the city's front and in all the immediate harbor is so perfect that for half a century there has been no perceptible change in the channel; indeed, it is claimed that upon the edge of the deep channel still lie some cannon lost overboard from a Spanish man-of-war before the acquisition of Florida by the nation, no sand having covered them. On the deep blue waters of the Gulf of Mexico ships of 24 feet draft may ride right into port and up to the docks; no waiting for the flood tide; no delays on account of the weather. There is no other such harbor on the Gulf, none south of Hampton Roads. And yet for years only one sort of freight went out of this splendid harbor—timber and lumber. Now they have added coal to a limited extent.

But these are not a tithe of the freights which should lade ships sailing from this ample haven. Iron ores and manufactures of iron; cotton and the various fabrics into which Southern factories are weaving it; cotton-seed oil and cotton-seed meal; implements of wood, carriages, wagons, ploughs; sugar-making machinery; hundreds of different agricultural implements fashioned by the hands of skilled workmen; the precious ores, the precious metals, from the mines of the South; fresh and salted meats, bacon, flour, meal, potatoes, mill feed, from the interior and the West; fish from the waters of the Gulf; apples, pears and other fruits, green, canned and dried; all products, the yield of the soil, of the workshop, of the laboratory—the various results of human industry, of brain and hand, in the interior and in the West, should find here a port for shipment. They should go thence in American vessels constructed in the shipyards of Pensacola and other Gulf ports; they should go as part of the South's quota of American commerce seeking now Mexico, Central America, Brazil, Cuba, but in the near future adding the isles of Oceania, the shores of Asia, the whole world, by way of the Nicaragua Canal.

Why not? Here is the deep-water harbor, here are the ships; there are the many and multiplying products for shipment. Here is a port where already many ships come for the product of forest and mine; it is a favorite port for mariners. Then what is the matter with Pensacola? What delays this commercial movement? Simply the lack of railways to the interior. Here is but one road, and that coastwise along a sandy reach, with termini at New Orleans and Jacksonville. Of course this road prefers the long haul and not to ship from an intermediate station, hence she carries cotton right through Pensacola to New Orleans. Railway builders and capitalists, both in the North and South, should know and appreciate these facts.

From this harbor should stretch a road to the coal fields and iron deposits; also one to the interior, connecting with great Western and trans-continental lines. There are plenty of excellent railways already—on paper. Here is the Pensacola & Memphis, with valuable franchises already acquired. It is rumored that the Illinois Central will seek here a Southern terminus; also, that Birmingham is contemplating a railway with this as the ocean end. They cannot build too soon. The time is ripe. If not, others should step in and occupy the fields. The situation means business.

By your showing Pensacola has increased her foreign shipments 44 per cent. in ten months of the current year over the corresponding ten months of last year—even under the adverse conditions enumerated; and at the same time Mobile has decreased hers over 30 per cent for the same period.

If Pensacola can make such an increase in spite of the lack of interior connections, what may she not do when the needed railways are built? Now she cannot be got at; the through trains pass in the night time. She is only a way station and no guide-post to mark her whereabouts—kept so for good reasons. This condition ought to be changed. Nature has not dropped down here this port of ports to be forever the sport of a single enterprise.

The site of Pensacola is an admirable one. The coasts of the Gulf are here high and well-drained—no low-lying marshes, no adjacent swamps, no malaria-breeding areas. Every one who visits the place is delighted with the natural environment and convinced of the excellence of the harbor. The pine forests, stretching away in rising plains, are sweet with resinous odors; the winter air is soft and balmy with breezes from the West Indies or far Yucatan; the waters are blue and still, the skies are soft, the bay is a panorama of life and beauty.

Only railways are wanted to connect the town with the larger world without, and business and commerce would here establish a great port.

Dec. 10, 1889.

E. W. C.

Industrial Matters in South Carolina.

[Spec. corresp'dence MANUFACTURERS' RECORD.]

YORKVILLE, S. C., Dec. 21, 1889.

Since last writing from here there have been several important movements in and immediately south of this extensive mineral district. In the Construction Department of last week's paper the organization of a kaolin company with headquarters at Columbia was noted. The name of this organization is South Carolina Mining & Manufacturing Co.; its capital stock \$100,000, and its purpose is to make fire-brick, furnace linings, fine tilings, assayers' utensils and retorts for various purposes, but not to attempt pottery for the present. As one part of the extensive property belonging to this company extends to the navigable part of the Wateree river, the company will be able to deliver its crude kaolin and its finished products at Northern ports at a minimum of transportation charges, while it can supply the South over the several systems of railroads that make connections in this State. The capitalists who are pushing this enterprise to completion, with the exception of one or two Northern men, are citizens of Columbia and Winnsboro. The industries they intend to develop are for the most part new to the South, and this enterprise may therefore be considered an additional mile-stone of progress.

A company has been organized, with \$20,000 capital, to purchase and operate the corundum mines referred to in a former letter. All details of the organization are not complete, but will be within a fortnight. The money has been provided, and the announcement of officers and plans of work will soon be made.

Explorations for pyrites since my last communication have resulted in discovering ores enough within a radius of twenty miles from Blacksburg to keep a dozen sets of chambers running the year round. Since the extended circulation of the facts published by the MANUFACTURERS' RECORD, Mr. McNulty has received numerous letters of inquiry and numerous propositions looking to the establishment of acid fertilizer and reduction works. It is more than probable that within a month a company will be organized for this purpose by local capitalists, who are now investigating the business with great painstaking.

I see in your Bankers' Edition the advertisement of "mine host" of the "Three C's Hotel" in this place. I am glad to commend him to the travelling public as a careful, considerate landlord, who sets a table far superior to most that are found in

Southern towns, and in the majority of Southern cities. His house is an old-fashioned building that "never was born" in an architect's brain, but grew as occasion required. However, the beds are neat and comfortable, the fire-places roomy and wood free, and besides all, mine host Clawson is fond of bird shooting, and always ready to accompany guests and show them where the largest coveys are feeding. Consequently for dog and gun men, this is one of the choice places in the South.

Iron Ores at Waynesboro, Va.

Readers of the MANUFACTURERS' RECORD will remember the mention from time to time of an immense iron ore property at Waynesboro Junction, Va., in which Gen. Rosecrans, Register United States Treasury, Prof. R. N. Pool and others are interested in developing. About this property there have been many different reports. Of the magnitude of the ore deposits and the ease of mining there can be no question, but the quality of the ore has been much discussed. Some who ought to be good experts have pronounced it one of the finest iron properties in America, claiming that the ores were different in some respects from most ores that have been developed in Virginia, and that to this was due the unfavorable reports that have at times been made. Prof. Pool has steadily adhered to his belief in the high quality of these ores, and for eight or ten years has sought to secure the property. It seems that the matter will soon be finally tested, as sidings are now being put in for shipping the ores, and thus it will be possible by actual furnace work to prove what is the quality of the ores on this property. Referring to this subject, the Staunton Virginian, which has always paid close attention to the mineral interests of that section, says:

"At Waynesboro Junction it is now believed the mines of the Roseland Co. will prove to be a good Bessemer ore property. It is a specular or red oxide, and as to the quantity there is no question. The latest results of the extensive mining operations there now going on encourage the opinion that an inexhaustible quantity of Bessemer ore will be found. A recent tunnel driven in from the west side of the mountain struck the ore 70 feet below the surface openings which have been attracting attention. The improvement in the percentage of metallic iron, and the lessening of what has been popularly pronounced silicon in the latest output, leave no doubt as to the great value of the mine, and justify the belief that a revolution may be looked for in iron and steel making, as a result of more complete and varied tests at this point. Tests made of the ore in the blacksmith shop, with bituminous coal as the fuel, and in retorts, demonstrate that what has been termed silicon is more in the nature of silicate of aluminum, operating to the advantage of the ore in being a flux rather than a disadvantage. The result of both the test in the shop and the retort was a malleable iron. This element in the ore has not been fully investigated, but from the results already obtained it will not be surprising if all that is claimed for this great property is fully realized. A boss miner engaged in the Herman mine, adjoining the Roseland property and partaking of the same character of ores, informed us that the ores are the same as the steel ores of the Gogebic district in Michigan, where they are brought up from a depth of from 600 to 1,000 feet, while at the Herman and Roseland mines they can be gotten above the water level by shafting 100 feet or tunneling from the western face of the mountains. These mines are located immediately on the main line of the Chesapeake & Ohio Railroad, and sidings are being constructed for the accommodation

of the mines. There are now from 70 to 100 hands at work in these mines, and the ore is found in inexhaustible quantities over an area of about 4,000 acres of ground.

The great value of these properties may be appreciated by a statement of recent sales in the Michigan district. There four separate holdings, embracing about 100 acres, were sold to a railroad corporation for \$4,000,000. One-fortieth of that sum appropriated to the development of the Roseland and Herman mines would expose values, if present indications are verified, worth ten times that of the properties above referred to.

An expert in handling ores of all kinds, including those of Lake Superior, informed us last week that he was satisfied the present output from the recent tunnel would be 55 per cent. metallic iron, and that the ore would improve as the veins were penetrated. These veins, as far as uncovered, number 13, ranging in thickness from 8 to 30 feet, and of unknown depth, and running through the properties to the length of five or six miles.

The expert referred to further said that he knew of no iron property that, in his opinion, compared with the Roseland, except the Cornwall district in Pennsylvania. The value of that district, we learn, is placed at \$50,000,000.

The possibilities of the Roseland are almost indefinite; if further laboratory tests of the ores sustain the opinion as expressed by the ore dealer whose opinion we have quoted. Of course we do not wish to mislead anyone. We know that superficial opinions have been expressed as to this property, which are unfavorable. But there is nothing so demonstrative and convincing as the pick and shovel, and the results of these are removing doubts and dispelling preconceived fancies, based upon surface examinations, and revealing wonders as to the immense values of the Blue Ridge red ores. Besides the red ores, the brown ores exist in vast quantities and first-class quality. Of themselves, the brown ores would make the property valuable, but when supplemented by the marvelous extent of the red ores, and their prospective quality, we know of nothing to compare with the intrinsic wealth of the properties mentioned.

We hope soon to be able to give some interesting facts in connection with this mineral district and the movements associated either directly or indirectly with it. Until then we content ourselves with this general reference."

The English Still Buying Up the South.

WINCHESTER, TENN., Dec. 18, 1889.

Editor Manufacturers' Record:

We have sold to Wm. E. Dabney and wife, of Birmingham, England, 110,000 acres of coal and iron ore lands and the charter of the Tennessee & Alabama Land, Mining & Railroad Co. Mr. Dabney is the representative of an English syndicate that propose to come on at once and engage in the manufacture of steel and build the railroad before mentioned. The preliminary contract is signed, and the principals will arrive about the middle of January to close the deal. A new town will probably be started on the Tennessee river somewhere near Stevenson. We have also sold a marble quarry lying nine miles west of this place to an English company. Work will be commenced early in February. Shall need engines and machinery for quarrying. J. L. GIRTON.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South cannot find a better medium than the MANUFACTURERS' RECORD.

BRIDGEPORT, ALA.

Where Trunk Line Railways
Cross a Mighty River.

The Only Outlet of a Region Rich in Minerals,
Timber and Agricultural Products.

A Royal Rendezvous for King Iron,
King Cotton and King Coke.

THE CUMBERLAND PLATEAU.

[Spec. corresp'dence MANUFACTURERS' RECORD.]

BRIDGEPORT, ALA., Dec. 23, 1889.

It is the unexpected that always happens—so say our friends the French. At all events, the unexpected is sure to happen once in a while. Bridgeport in the extreme northeastern corner of the State of Alabama (which corner is structurally a part of Tennessee) illustrates the above adage so far as concerns new Southern city sites.

Millions of people have passed through Bridgeport not only on the Memphis & Charleston Railroad, but likewise on the Nashville, Chattanooga & St. Louis,—aye, also, aboard boat on the Tennessee river—but the chances are that not a dozen among these millions ever dreamed of this as a superior location for a new city. Perhaps such oversight was due to inattention to opportunities—an inattention which heretofore prevailed at the South by reason of a general state of blindness to money-making opportunities, and at the North by reason of ignorance of the possibilities of the South and to prejudice. To illustrate: I was told by an old gentleman, who some years ago lost a fortune trying to introduce New River (West Virginia) coke, that in his day of endeavor nobody would believe that there was any good coke outside of the Connellsville district in Pennsylvania. Since that time, however, as everybody knows, New River coke, then despised and rejected, has come into high favor, being preferred by many furnace men to that of Connellsville. This bit of history will be repeated in the coke district of which Bridgeport is the natural outlet.

I have spent several days at this river and railroad junction town in the role of explorer. The first place I sought was the high ground on which were built the Federal forts which commanded the Tennessee river in war time. Here I met and made myself acquainted with Mr. F. J. Kilpatrick, the well-known New York lumber merchant, who is building a handsome residence on the highest point of this river-view elevation. I found him among the carpenters. "Come up" said he, "and contemplate the finest view in all the world." I went up to the very top of the house, and sure enough there beheld the finest panorama, (the prospect at Buena Vista in Virginia alone excepted) that I can remember to have looked upon either on the Atlantic slope, or the Pacific slope or in the intervening region. Up the river could be seen the town of South Pittsburg and the site of Kimball, while on down the river, to where Sand Mountain forces it to curve away to the westward, appeared a landscape calculated to make a man forget his troubles, his trials and his tribulations,—in fact, his very debts.

This tongue-like elevation runs upward from the point where the Sequatchie Valley railroad joins the two trunk lines. It gets higher and higher as the river is approached, except that its top is nearly flat. In this respect it is the Cumberland mountain, and the great Cumberland plateau in miniature. Are you a millionaire, my patient reader? Are you even well-to-do in respect to pelf? Then, if you are seeking a place where there will be no grasshoppers to burden the evening of your

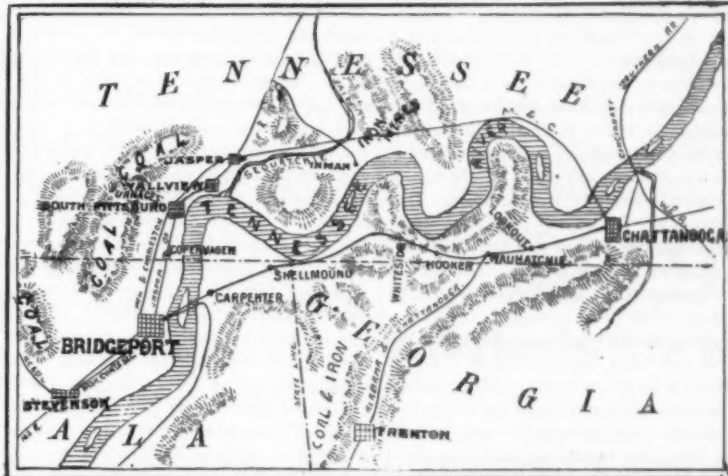
perhaps not altogether blameless life, then come and build for yourself a home on this river-view plateau.

But nowadays people are more interested in the chances a locality offers for money-making, than in picturesque environments or salubrious surroundings. Apropos of salubrity, however, I was told by Mr. C. F. Scofield, who came to Bridgeport two years ago from Utica, New York, that he had been abandoned by the Utica doctors as a hopeless invalid, but since residing here he had got entirely well. "But" I queried, "haven't you had a good deal of malaria to fight in the meantime?" "Not a bit of it," he replied. "Indeed, there is no more malaria here than in the central part of New York State." But this is a digression.

Viewed from a money-making standpoint, Bridgeport has at least the advantage of not being skimmed milk. The cream has barely been broken into. As has been said, the Nashville, Chattanooga & St. Louis Railroad, the Memphis & Charleston Railroad, the Sequatchie Valley Railroad, and the second greatest navigable river in the United States, combine to furnish Bridgeport with transportation facilities. Moreover, the Birmingham Mineral Railroad, (a part of the great Louisville & Nashville system), so it is reliably reported, will here strike the Tennessee river. It is certain that a line to connect with the Cincinnati Southern at a point called Lansing,

which will build the town of Kimball. Having completed his work on that gigantic scheme, Mr. Hudson took hold of Bridgeport, which is a fit field for the permanent employment of his rare gifts as an organizer and his extraordinary executive ability. Mr. Hudson has one of those open kindly faces calculated to make every new-coming stranger his friend. He has, moreover, a frankness of manner and a certain charming *bonhomie* which inspire confidence, so that one instinctively feels that Hudson will deal fairly however far he may be trusted. Then, too, there is a certain forcefulness in his manner and expression which makes you believe when he says he is going to build a big city at Bridgeport that he means to do it and will be able to do it. Like W. P. Rice he never frets or loses his equanimity. There are some very strong men associated with him in the directory of the company.

In sight of Bridgeport towers the Southern extremity of the great Cumberland Mountain, which stretches northeastward level on top as a Kansas prairie. This great plateau is underlain with the greatest of the coking coal measures. The ownership by the Bridgeport Co. of 80,000 acres of the best section of this immense fuel field, will make the stock of that company sought as a permanent investment. The field has four workable veins, one of 4½ feet being coking coal; and as Dr. J. M.



MAP SHOWING LOCATION OF BRIDGEPORT, ALA.

will be built provided certain owners of coal lands will make fair donations. This latter will be one of the greatest coal roads in the world, running straight along the top of the Cumberland Mountain for nearly a hundred miles with easy mineable coal all the way.

This road will traverse the great 80,000-acre coal field which is the property of the Bridgeport Land & Improvement Co. There is no way of estimating the value of these lands. At ten dollars an acre they are worth \$800,000. But they will be worth that much for agricultural and horticultural purposes, to say nothing of timber, on the very day this new coal road is opened to traffic. Unless the owners of certain properties stand in their own light, this road is as certain to be speedily built as that capital stands ready to gobble up sure dividend-paying baits. Mr. P. W. Keith, of Scottsboro, Ala., is at the head of this enterprise.

And that raises the question, Who is the general manager of the Bridgeport Land & Improvement Co.? Mr. James W. Hudson, the man who has lately come into great prominence by reason of his conceiving and executing a plan of handling crude, undeveloped properties and of unifying conflicting interests, the outcome of which was the organization under his direction of the New York & New Orleans Coal & Iron Co., whose assets have recently been bought by the English syndicate

Ford said in his great Denison speech, "Coke is King." I am told that when the railroad is built to these fields that coke can be laid down in Bridgeport at 90 cts. a ton, and that it will be equal in quality to that of Pocahontas. I don't quite believe either of these allegations, nevertheless they are both probably close enough to the truth to make Bridgeport one of the most available iron manufacturing centers in the world.

Speaking of iron industries, the fifteen hundred acres laid out as the town-site of Bridgeport includes not only high, dry undulating land elevated from 100 to 300 feet above the river, but a great area of flat ground, which withal is free from overflow, suitable for furnaces, rolling mills and all such heavy works. These sites, while adjacent to the river, are likewise reachable by railway turnouts.

It will be remembered that it was predicted in these columns that the result of Mr. W. P. Rice's industrial invasion of Alabama would be the investment of New England capital all over the State. That prediction has been verified at various points. A number of men whom Mr. Rice induced to come South, have bought a considerable block of the stock of the Bridgeport Land & Improvement Co. Among these may be mentioned Judge L. L. Cochran, Dr. Quin and Mr. R. C. Johnson.

Apropos of New England people, on my

arrival here I found Mr. E. E. Smart, of Boston, the man who has just influenced the investment at Florence, Ala., of a hundred and fifty thousand dollars of New England money. Although Mr. Smart is heavily interested at Florence, being a director in the furnace company there, he told me that he considered this one of the most desirable locations in all the South, and after making a careful investigation of the assets of the new company he thought so well of them that he made an offer to take for himself and associates the bulk of the stock the company proposes now to sell. What he doesn't keep for himself, he will sell to his friends in New England, and unless all signs fail this stock will sell in 60 days for twice what it is to be floated at. The very fact that so clear-headed and cautious a man as Mr. Smart has made such an offer goes very far to make me believe that a pile of money will be made.

A concluding word. Is it not strange that so many years elapsed without some capitalist making a note of the fact that Bridgeport was a natural town-site; that it was the only outlet of the fertile Sequatchie Valley, which is already penetrated by rail for forty miles; that it was destined to be the distributing point for Murphy's Valley across and down the river; that 15,000 bales of cotton and 300,000 bushels of grain were here transferred from river to rail; that it was the outlet of a great lumber district and consequently adapted to wood-working industries? Was it not strange that no man with money noted that this was the best point on the upper Tennessee river for bringing King Coke and King Iron together with King Cotton as their guests at a great industrial feast? If you and I had noted these things ten years ago and gone ahead earnestly to make something out of them we might have been millionaires to-day. But we didn't. The New South was too young and our thoughts were too narrow. Tennyson explained it long ago when he wrote:

"For I doubt not through the ages,
"One increasing purpose runs
"And the thoughts of men are widened
"With the process of the suns."

THOMAS P. GRASTY.

MR. J. L. GIRTON, of Winchester, Tenn., whose letter reporting the sale of 110,000 acres of land to English capitalists appears on page 12 of this issue, in a later letter giving additional particulars says: "We are under contract to furnish 110,000 acres of coal and iron and timber lands, and the charter and right of way of the Tennessee & Alabama Land, Mining & Railway Co. This company, which is composed of the Staffordshire iron masters of Staffordshire and Birmingham, England, has signed the preliminary contract to take the amount of land named provided the iron and coal comes up to representations. We have sent them samples of all the minerals and specimens of coke and the official analyses as made by Potter & Riggs, of St. Louis. We shall locate this company on the Tennessee river somewhere between Bridgeport and Bellefont, Alabama, where large steel works will be erected at once, and work commenced on the new railroad. Cannot at present say much about the railway until the company arrives. The writer has been selected as one of the American managers and Wm. E. Dabney, of Birmingham, Eng., as the other. We hope to get the sale closed out next month, and work commenced on the furnace by the first of February. The purchase price of the above tract will be a trifle over one and one-half million dollars."

The MANUFACTURERS' RECORD comes to us this week in a remarkably neat cover. It looks better than ever before on the outside, and there is no evidence of falling off on the inside.—American Machinist.

FLORIDA PHOSPHATES.

The Opinion of a Fertilizer Expert.

Is there a Fortune in the Sandy Soil of the Land of Flowers?—An Exhaustive Discussion of an Interesting Subject.

As Florida phosphates seem to be exciting a great deal of interest all over the country among fertilizer manufacturers and dealers, more especially in Charleston, where it is, of course, a matter of vital importance, and as there seems to be a dearth of accurate and intelligent information on the subject, a few remarks by one who professes to be an expert on such subjects, and who spent a month in Florida this summer looking up this matter, may be interesting to your readers.

No geological survey has ever been made of Florida, it being regarded as a "sand bank and a coral reef," and for this reason the value of her phosphate and other mineral deposits have been overlooked. Now that the present boom has been inaugurated, however, we may look for the development of some very valuable finds, not only in phosphates, but in other minerals, such as natural cement, gypsum, etc.

Fossil bones and phosphates, mostly low grade, are found nearly over the entire State, but in too small quantities to work. As is naturally to be expected, the former being more recent than in South Carolina, remains are in a better state of preservation, and some few handsome specimens are to be found. In the Sub-Tropical Exposition at Jacksonville is to be seen a magnificent specimen of the skull of a mastodon, wonderfully well preserved and with tusks five or six feet long. Numerous valuable fossils have been sent to Washington. The fossil remains found consist principally of the ribs of the manatee or sea cow, which are also found, though not so abundantly, in South Carolina. It is a curious coincidence that all the phosphate deposits so far discovered are on the Gulf coast. Nothing has been found on the Atlantic side of the peninsula. On the South Atlantic shore, however, which is very undeveloped, a better acquaintance may result in something.

Beginning on the Gulf coast, then, in the extreme northwestern corner of the little spur that runs out from the peninsula proper, we find the Sopchoppy Phosphate Co. organized, and working in a desultory way a deposit in Wakulla county. Following the trend of the coast southwards, we come to the Suwannee river, at the shoulder of the peninsula proper, which has furnished most of the fossil remains found, and which is said to literally bristle with them.

Coming southwards, we next strike the Withlacoochee river, on whose banks, about eighteen miles from the Gulf, the great phosphate deposit of Florida, and perhaps of the world, has been discovered. The next deposit of phosphate we hear of is in the Alafia river, a small tributary of Hillsborough bay, near Tampa. On the southern shore of the mouth of Tampa bay, on Tenaceia Island, and on the adjacent mainland, we find phosphates, which are also reported a short distance away in the Manatee river. Running our finger further south along the map we enter Charlotte's harbor, at the head of which enters Peace river, and at another point the Myakka river, on both of which there are phosphate deposits, but more especially on the first.

Up to September last these included all the known deposits of phosphates in Florida, although there were indistinct rumors of a valuable find on the South Atlantic coast, which, however, does not seem to have materialized.

Any one who has followed this description, with a map before him, will see that the whole Gulf coast is a phosphate bed. Fortunately, however, for our Carolina phosphate magnates, the majority of these deposits are of little or no value. The Sopchoppy deposit consists principally of a low grade phosphatic sandstone, mixed with a considerable percentage of fossil bones, which bring up the average analysis to something like 40 per cent. of phosphate of lime. It is not regarded as very valuable, although it might pay to separate the bones, which analyze about 70 to 75 per cent.

The Suwannee river deposits are not extensive enough to be worked profitably and are interesting from a scientific and geological standpoint only.

The next deposits are situated on the Withlacoochee river, about eighteen miles from the Gulf, near Dunnellon, a small place on the Silver Springs, Ocala & Gulf Railroad, a branch of the Florida Central & Peninsular, or the old Florida Railway & Navigation Co., which runs from Fernandina as far south as Orlando, with numerous branches. The deposit is owned by the Dunnellon Phosphate Co. (lately organized), of which Mr. Geo. F. Dunn, of Ocala, is the president and principal stockholder. They own altogether about 13,000 acres of land, which was all selected by a prospecting party, who had a chemist along with them, and who purchased only where they saw phosphate indications. The company is capitalized at a million and a quarter dollars.

In order to understand the formation of the deposit it is necessary to state that considerable tracts in Florida are underlaid by solid beds of carbonate of lime, which is still in a soft state, a little harder and more crystalline than our marl. This begins at varying depths from the surface (sometimes only one or two feet), and continues down to great depths. The surface indications of this deposit are large slabs of flint, which occur in veins in the carbonate, and are left on the surface after the latter has been dissolved away and soil formed in its place by the gradual process of nature. The formation of the Dunnellon phosphate beds corresponds exactly with this carbonate formation, which leads to the theory that they were probably formed by the leaching away of the carbonate and the gradual deposition of phosphate of lime in its place. The surface indications in this case are (usually) a hard, dense, stratified, white rock, which analyzes as high as the equivalent of 75 to 80 per cent. of bone phosphate of lime, and will average about 70 per cent. This is disseminated through the surface soil in varying quantities, where it is found, but by no means constitutes the bulk or the most valuable part of the deposit. Beneath this, at depths varying from one to five or six feet, is found a material varying in color from pure white to a dark, creamy yellow, and having nearly the same consistency as our South Carolina marl. I myself have seen an auger bored down sixteen feet into this stuff without getting through it. To this depth it remained of the same mechanical consistency throughout, perfectly smooth and free from grit. In other words, it was a solid bank of phosphate sixteen (16) feet thick, to my certain knowledge. How much thicker I do not know, but "crackers," (i. e., natives) who were ignorant men and did not know the value of the material, (as evidenced by the fact that their lands were being bought from them every day for a song) testified that they had seen wells dug in this material, before getting through it to a water-bearing strata, to a depth of sixty feet. I do not mean to say that this deposit covers the whole tract which the company owns. It occurs in pockets, and runs in ridges parallel to the old shore lines and to the Apalachian range—i. e., northeasterly and southwest-

erly. From my limited knowledge of the deposit, however, and the fact that all the land was, as I say, carefully and intelligently selected, I should regard, as a safe and conservative estimate, that it occurs on one-fourth of the 13,000 acres. However, as I was only on the ground for one week, my opinion on this point may not be reliable. I have not seen an analysis of it which ran below 50 per cent. of phosphate of lime. Several made by myself and other chemists ran 60 to 65 per cent. The average would be probably 55 to 60. It contains a trace of carbonate, no fluorine, a very small percentage of sand, about $\frac{1}{2}$ per cent. of potash, 40 per cent. of lime, and 10 to 15 per cent. of iron and alumina. This latter is very injurious, ordinarily, causing the soluble phosphoric acid in the acid-treated material to revert, (which in England is a very serious matter) and also preventing it from drying out, another very serious objection here and elsewhere. But from experience gained in treating several samples of this material with acid I have come to the following conclusions: First, that the acid-treated material will dry out, especially when made from the marly or clayey deposit, which combines with the acid with great avidity, soaking it up and getting very hot without getting liquid at all. This is with the sun-dried material, and using such proportions of acid and phosphate as are usually used with Carolina rock. The rock deposit does not dry out so well when treated with acid, and might not be profitably used, as it takes a long time to dry, and then sets into a hard mass. Second, neither does the large percentage of iron and alumina cause the soluble phosphoric acid to revert, as I have analyzed samples of the acid phosphate two months after it was made, which contained an unusual percentage of soluble as compared to reverted phosphoric acid. I can only account for these injurious constituents not acting in their usual way by supposing that the presence of so much lime counteracts their presence. Third, this material yields a larger percentage of "available" when treated with acid than Carolina rock does. One specimen of acid phosphate, made in the proportion of one thousand pounds of 50° B. acid to twelve hundred of the sun-dried marly deposit, and analyzed two months after it was made, yielded 17 per cent. of "available," (of which 14 per cent. was soluble), with $2\frac{1}{2}$ per cent. insoluble. Another sample by a similar formula yielded two days after it was made 18 per cent. of available, with 27-10 per cent. of insoluble.

The mining and preparation for market of this material would be a simple and inexpensive process, as it occurs exactly like a clay bank—a solid bed of soft material—which would simply have to be shovelled up and brought to the surface. It would then have to be dried, either by the sun or artificially on the large scale, probably by means of steam-heated cylinders, such as are used in Chicago rendering establishments to dry tannage, etc. This would finish its preparation as far as the miners are concerned. The final process, the grinding, would interest the manufacturer and might give ours some trouble at first, as, although the material is perfectly soft and friable and contains very few lumps, it is perfectly "dead" when struck and the fine particles have no "slickness" about them. For this reason it would probably clog a Lucop mill or buhr-stone unless it was very dry. However, simply passing the very dry stuff through rollers might be sufficient, as it is in such a fine state of subdivision naturally and soaks up acid so readily. The principal difficulty in mining would be drainage, as a portion of the deposit is in very low land, and in going down to such depths it would be necessary to have steam pumps and conduits for the waste water to the river. Taking all this into consideration, however, it could be

mined for a great deal less than Carolina rock, because in the first place, when a cubic yard was thrown out it would be a cubic yard of pure phosphate, whereas in Carolina this constitutes but a comparatively small percentage. Secondly, the actual expense of getting down to the material would be nothing like so great, as not one-hundredth part of the surface earth would have to be thrown off in proportion to the phosphate mined. The drainage would probably not be more than on some of our lands. The drying should not cost more. There would be no washing. And, lastly, the grinding and crushing, after we learned how to do it, would have to be very much less.

As to transportation facilities, it would probably have to be shipped to Fernandina, which is a deep-water port, one hundred and eighty-two miles distant. Or it might be lightered down the Withlacoochee river to the Gulf, but as the whole Gulf coast is very shoaly it would probably only be practicable for sailing vessels to get up to the mouth.

Of the other deposits in Florida, that on the Alafia river is being worked by an Atlanta company. There seems to be some doubt about its value, however, and I suspect that it is in too small quantities. Those on Tenaceia Island and the adjacent mainland consist of low-grade sandstone and fossil bones, and are not in sufficient quantity to warrant mining.

The deposits around Charlotte's Harbor appear to be very valuable. Geo. W. Scott, of Atlanta, with whom are associated several New York parties, own between 5,000 and 6,000 acres of selected phosphate land, which was bought for very little before the presence of phosphates was suspected. The company has been involved in a lawsuit from its formation, and an injunction served on Mr. Scott by one of the partners has prevented any work being done. Now, however, the objectionable partner has lately been bought out for a round sum (considering that he only owned a one-sixth interest), and we may expect developments on an extensive scale very shortly. All the mining that has so far been done in this locality has been done by a man named Morehead, who only owns some 200 acres in the center of Col. Scott's tract. All of it has been shipped by rail to Atlanta and used by the Geo. W. Scott Manufacturing Co., who, from all accounts, are well pleased with it. Some of it runs very high, and all that I have ever seen runs over 60 per cent. It resembles Carolina rock more than any Florida phosphate, perhaps, but is in very much smaller nodules, and has a considerable proportion of fossil bone in it.

The deposits on the Myakka river do not seem to be so valuable as those on the Peace river. From all I can hear, there seems to be some good land to be bought in this section, however—i. e., on the Peace and Myakka rivers and Charlotte's Harbor. I have written this article entirely spontaneously, and solely with a view to add a little to the public knowledge by relating experiences gained at a considerable cost to myself, and also to draw the attention of Charleston capitalists to the fact that there are good investments in the "Land of Flowers" as well as in Alabama, and in a business of which they know something. Florida phosphates may be a better investment than Alabama town lots, even when the town lot is the future site of the city hall of a prospective corporation of half a million inhabitants.

Florida may not compete with Carolina for several years to come, but in the meantime it is poor policy to laugh at a young competitor, for young rivals sometimes have very lusty lungs and make themselves heard, and "he who laughs last laughs best."—W. P. Frost, chemist, of Savannah, Ga., in the Charleston News and Courier.

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The Future Iron *and* Steel Center of America.

THE PASSAGEWAY FOR RAILROADS BETWEEN THE WEST AND THE EAST.

A SOURCE OF COKE SUPPLY FOR THE SOUTH AND WEST.

THERE ARE NOW UNDER CONTRACT:

A Basic Steel and Iron Plant, daily capacity 300 tons, to cost \$1,000,000 and to employ about 1,000 hands.

An Iron Rod Mill; A Sheet Mill; A Nail Mill.

Two Coke Iron Furnaces, 150 tons daily capacity each, and one Charcoal Furnace.

A \$500,000 Tannery—the largest in the world.

Fourteen Coal Mining Enterprises, to employ about \$2,000,000 capital.

A Dozen Wood-Working Enterprises.

A Twelve-Mile Belt Railroad.

Tile Works, Fire and Building Brick Works, and a dozen or more other enterprises.

\$14,900,000

Already Invested in the Development of Middlesborough.

Other New Industries are Being rapidly added to those already in operation and contracted for.

COAL, IRON, TIMBER

AND OTHER RAW MATERIALS.

DELIGHTFUL AND HEALTHFUL MOUNTAIN CLIMATE,

WHERE MALARIA AND THROAT AND LUNG TROUBLES ARE UNKNOWN.

Elevation from 1,300 to 2,400 feet above the Sea Level.

SURROUNDED BY VALLEYS OF RICH AND PRODUCTIVE FARM LANDS.

SEND FOR CIRCULARS, PROSPECTUS, MAPS, ETC., TO

MIDDLESBOROUGH TOWN COMPANY,

MIDDLESBOROUGH, KY.

The NORTH CAROLINA STEEL AND IRON COMPANY, WORKS--GREENSBORO, N. C.

Iron Mines---Chatham, Moore and Madison Counties, N. C.

This company starts out with the most flattering prospects of any company in the South. It has been organized for the manufacture of Bessemer Pig Iron and Steel. It owns large bodies of high-grade Bessemer, Mill and Foundry Iron Ores, and has enough **Ore in sight to supply 1,000 tons a day for fifty years.**

Coke will be brought from Eastern Kentucky by the Western North Carolina Railroad, or from Virginia by the Norfolk & Western and the Cape Fear & Yadkin Valley, which two roads will within a year connect at Mt. Airy.

The company has secured the famous "Ore Hill" and other iron ore lands amounting to some 2,000 acres in Chatham and Moore counties, N. C., on the line of the Cape Fear & Yadkin Valley Railroad, 40 miles from Greensboro; other magnetic iron ore lands in Western North Carolina, ample limestone 35 miles from Greensboro, on line of Cape Fear & Yadkin Valley Railroad, besides other franchises and about 2,000 acres of land in and around the City of Greensboro, which is to be laid off in Streets, Building Lots, Manufacturing Sites and Parks.

The company will at once proceed to erect at Greensboro a 150-ton daily capacity iron furnace plant for the manufacture of Bessemer pig iron, to be followed by others, with a steel plant and rolling mills for making steel rails; these plants to be at Greensboro. The company will foster and encourage all kinds of industries, and will make Greensboro a large manufacturing city, because, situated as it is, with its railroad connections, making it accessible to large bodies of the best kind of Bessemer ores, lime-

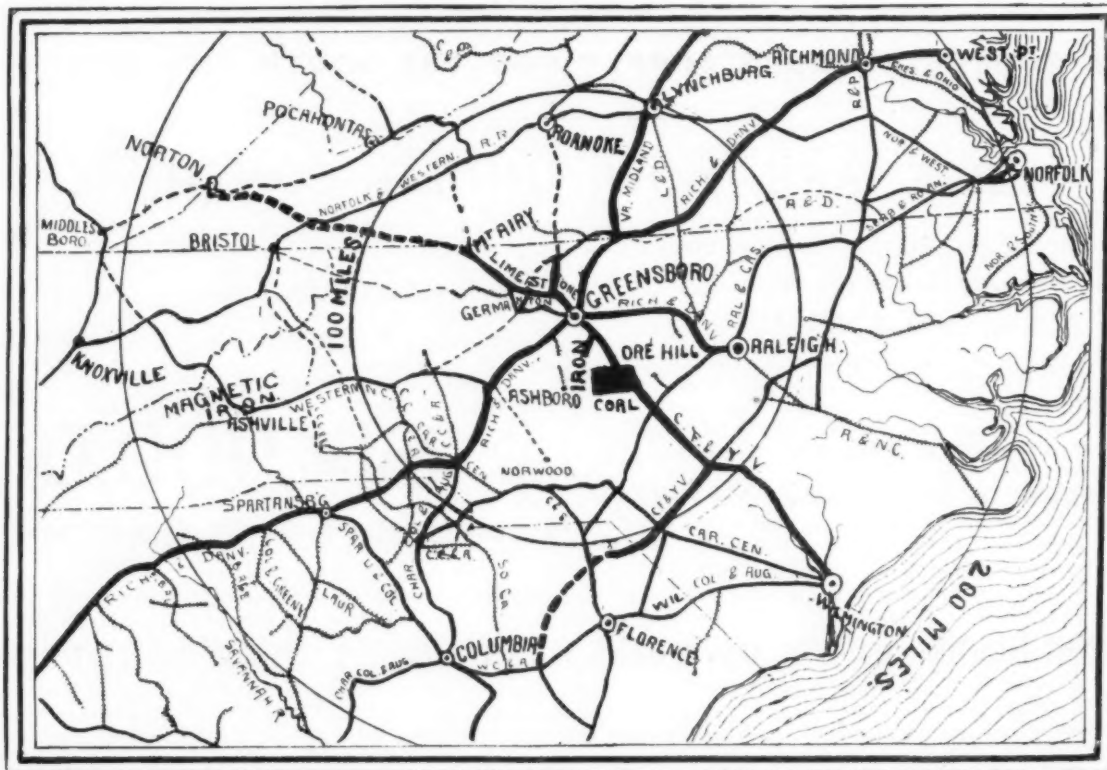
stone and coke, it is estimated that Bessemer pig can be made here at \$8 per ton. Iron has been made from these "Ore Hill" ores ever since before the Revolutionary war. Over 25,000 tons of charcoal pig have been made from these ores.

The Confederate government appropriated several millions of dollars towards making these iron ores available for war purposes, and the work on them was only stopped by the close of the war. The ores consist of brown hematites that average 56 per cent., red hematites that average over 60 per cent., and magnetites that average about 60 per cent., all of which are practically free from phosphorus and are low in silica, besides the famous black band ores.

The average run of pig made at the "Ore Hill" furnace in April, 1865, was 63 per cent., which shows what the ores will do.

These properties have been favorably reported on by such men as Prof. Emmons, Commodore Wilkes, Prof. Genth, Prof. Shaffer, Prof. Kerr, Prof. Wilber, George G. Francis, M. E., S. A. Richards, Smith Newman, Thos. P. Williams and many others, and from working an analyses of the ores show them to be in large bodies and high grade pure ores, from which to make high grade pig metal and steel.

This much for the ores. This company is located at the prosperous City of Greensboro, with all its various advantages, and is backed by the fostering care of the Richmond & Danville and the Cape Fear & Yadkin Valley Railroads, and officered by men of thorough business experience.



MAP SHOWING THE LOCATION OF GREENSBORO AND ITS RELATIVE POSITION AS TO ORES, COKE, LIMESTONE, RAILROAD AND WATER TRANSPORTATION.

Analyses of the Ores.

	BROWN ORES.		RED ORES.		MAGNETIC ORES.	
Metallic Iron.....	57.41%	58.67%	67.48%	68.74%	56.00%	64.00%
Phosphorus.....	none.	none.	none.	none.	none.	none.
Silica.....	1.42	3.79	2.10	1.40	4.25	3.10
Sulphur.....	none.	0.44	trace.	trace.	none.	none.
Titanium.....	....	....	....	....	none.	none.

Cost of Making Bessemer Pig Iron at Greensboro, N. C.

Mining 1 1/2 tons 60% ore at 50 cts. per ton.....	\$.83
Freight 1 1/2 tons 60% ore, 40 miles, at 1/4 c. per ton per mile.....	.50
Coke, 1 1/4 tons, at \$1.65 f. o. b. at Pocahontas.....	2.07
Freight 1 1/4 tons coke, 245 miles, at 1/2 c. per ton per mile.....	1.53
Limestone 25c. Labor \$1.00.....	1.25
Maintenance 50c. Repairs 50c.....	1.00
Interest 25c. Salaries 50c.....	.75

Total cost ton of pig iron.....\$7.93

Bessemer pig iron can be made here at these figures (\$7.93 a ton) and there is no other place in America where it can be produced at a lower cost; but even if calculations be based on a cost of \$10 a ton, the profits would be more than satisfactory, whether the iron be shipped North or be manufactured into steel rails here, as is intended.

Besides this, "The North Carolina Steel and Iron Co." own about 2,000 acres of land in Greensboro, that they will lay off into Streets, Lots, Manufacturing Sites and Parks. This land was secured at very low figures, and inside of a year it will be worth more than the entire capital stock of the company, without any real estate booming.

GREENSBORO is now a prosperous town of 7,000 inhabitants, and has all modern improvements and many manufacturing enterprises.

The North Carolina Steel and Iron Co.

OFFERS A PART OF ITS

\$1,000,000 Capital Stock at Par.

BOOKS OF SUBSCRIPTION ARE OPEN AT

Davis & Wiley Bank, Salisbury, N. C.

The National Bank of Greensboro, Greensboro, N. C.

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Vice-President and General Manager,	- - - - -	J. J. NEWMAN.
Secretary and Treasurer,	- - - - -	SAM'L H. WILEY.
Attorney,	- - - - -	THEO. F. KLUTTZ.

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J. A. ODELL.	A. B. ANDREWS.	J. A. GRAY.
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THE IRON AND COAL CENTER.

Future Commercial and Manufacturing Center and Year-Round Health and Pleasure Resort of

WESTERN NORTH CAROLINA

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Population 1,000 People.

Altitude 1,800 Feet.

SURROUNDED BY VAST FORESTS OF THE FINEST TIMBER IN AMERICA.

The Heart of the Inexhaustible Magnetic Iron Ore District of Western North Carolina.

The Iron Ores of this district are the only ores in the South from which steel can be made with profit and advantage. Only point between Knoxville and Atlantic Ocean, and in Western North Carolina, that has cross and competitive railroads.

With the superior quality of Iron Ore and Coking Coal, Marion, N. C., has in its neighborhood, it will be able, when its minerals are developed by railroads now building, to make steel at almost as low a figure as Birmingham now makes iron.

UNEXCELLED ADVANTAGES FOR MANUFACTURING.

The Tide of Emigration No Longer Flows West, but South.

We have more than 500,000 ACRES of Western North Carolina FARMING, TIMBER AND MINERAL LANDS FOR SALE at Remarkably Low Prices, also MARION BUSINESS AND RESIDENCE LOTS, Improved or Unimproved.

Our Iron Ores and Coal Fields.

Twenty-three miles north of Marion, N. C., is the Cranberry Iron Mine. The ores of this mine, according to the report of six different assays by the State Geologists of North Carolina in "Geology and Ores of North Carolina," Vol. 2, Chapter 2, vary from sixty to sixty-eight per cent. magnetic metallic iron entirely free from phosphorus, sulphur and titanic acid.

This is one solid mass of ore 400 feet wide, 300 feet high and 1,700 feet long.

Between the Cranberry mine and Marion, and within 8 or 10 miles of Marion is the Linville Mountain, the largest mountain of iron in the known world.

A direct line of railroad is now being built from Marion to the Linville Mine, which also puts Marion in direct communication, and within three hours' haul by freight, of the Virginia coking, cannel and splint coal fields, the finest quality and easiest mined of any coal in the known world.

Our Railroads.

The Charleston, Cincinnati & Chicago Railroad is now completed from Charleston, S. C., to Rutherfordton, N. C., a point twenty miles south of Marion. The contract for completing this road to Cincinnati, O., has been let and the grading is now being done. When built this road will cross the Western North Carolina, a division of the Richmond & Danville Railroad, at Marion, N. C., thereby making Marion, N. C., the only city in Western North Carolina and the only point between Knoxville and the Atlantic Ocean, a distance of about 500 miles, that will have competitive railroads.

Woods and Timbers.

Among the various kinds of timber in this section are wild cherry and walnut, which according to the report of the State Board of Agriculture, attains the enormous height of from sixty to eighty feet, and a diameter of three feet or more. Among the vast forests of giant trees the other timbers are chestnut, white pine, hemlock, black birch, locust, lime and various kinds of oaks. In comparison with the extent of forest lands around Marion, the clearings are mere patches, there being in McDowell County, ac-

cording to the report of the Board of Agriculture of North Carolina, 122,129 acres of wood land, and 34,778 acres of land cleared for farms.

Health, Climate and Water.

Marion, with the climate of Italy, the purest water on the continent and mineral springs of unsurpassed medicinal properties is fast becoming a great health resort of the South. With the invigorating balsam breeze from the singing pines, purified by the mountain and vale, taken in at every breath, consumption or lung trouble cannot exist, and malaria is unknown.

Location and Advantages.

We have two good schools, four churches, two newspapers and a low rate of taxation. Come to see us. We will treat you well and give you valuable information free.

Marion is surrounded by an excellent fruit country. We have mountains of the finest Building Stone convenient.

Our Water Power.

Running by Marion is the Catawba river with a fall of over 200 feet to the mile, affording unlimited water-power to manufacturers.

A Coming Great City.

With the above advantages, which are greater than Birmingham, Ala., had a few years ago, can any person doubt the fact that Marion, N. C., will soon be a great city? The world has now confidence in the resources of the South; a few years ago it did not. Therefore Marion should grow more rapidly than a city did ten or fifteen years ago.

Marion has never had a boom, its first auction sale of lots will take place on the completion of the Charleston, Cincinnati & Chicago Railroad, which will be only a few months.

Address

OLD NORTH STATE LAND CO., Marion, N. C.

OR

W. E. BERRY & CO., Birmingham [Ala.] Agts., 2008½ Second Ave., P. O. Box 422.

FACTS ABOUT FLORENCE.

LOCATION.

Florence is in North Alabama, near the Tennessee line, on the Tennessee river, which is navigable here for large steamers. It is on the Memphis & Charleston Railroad, and the Nashville & Florence branch of the Louisville & Nashville Road.

AGGR GATE OF ADVANTAGES.

There are many places in the South possessing the advantages of a good climate, healthfulness, natural resources and manufacturing capabilities more happily combined and in a higher degree than can be found in any other part of the country. It is believed, however, that at no point in the South, and hence nowhere in America can there be found an aggregate of so many unsurpassed advantages and attractions as exist at Florence.

IRON AND COTTON MANUFACTURING.

Florence can make iron as cheaply as any place in Alabama. It has facilities for the manufacture also of cotton goods equal to those of any other place. Anything that uses wood as a raw material can be made here at as low a cost as anywhere in the South.

Thousands of acres of iron ore of a high grade within a few miles of Florence are owned by Florence companies. Limestone is quarried within the town limits. There is enough of it to last for ages.

Cotton mills would get a large part of their supply from the country around Florence. Cypress creek furnishes water power and mill sites enough to make Florence the Lowell of the South.

North of Florence, and up the Tennessee river, there are large areas of timber, embracing a wide variety of hardwoods—forests that the axe has never touched.

COMMERCIAL AND AGRICULTURAL FACILITIES.

Besides its industrial possibilities, Florence is a point of great commercial importance, and is becoming the center of an extensive mercantile business. It has the advantage of both rail and river transportation and of competing railroads. Several additional railroads are now under construction to open up new trade connections to Florence.

Florence is surrounded by a wide extent of fertile and productive country, as well adapted for farming, stock raising, fruit growing, truck farming, dairying, &c., as any in the world. Further, it has a climate that is delightful the year round. Its health record cannot be surpassed. It has no malaria. In fact, people who live here enjoy a remarkable exemption from ailments of every sort. It has an abundance of the purest water.

BEAUTY OF LOCATION.

For beauty of location Florence is without a peer. The Tennessee river at this point is as romantic and beautiful as the Hudson. The rolling character of the country, the slopes and hills and alternating valleys furnish a picture to charm an artist's eye. The lovely Cypress creek, a deep and rapid stream emptying into the river just below the town, presents at every turn in its tortuous course a scene of entrancing beauty. The views from some of the higher hills are as fair as the eyes of man ever rested on.

Limited space allows here only the briefest summary of a very few of the more important facts about Florence. For more detailed information write to either one of the following companies. Or better still, come down and see for yourself. Investigation is all that Florence asks or needs.

Lauderdale Manufacturing Co. Florence Cotton and Iron Co.
Florence Investment Co. Florence Railroad and Improvement Co.

GROWTH.

Florence is making more rapid progress, proportionately, than any other town in America. This is a strong statement but it is true. And its growth is on a solid and permanent basis.

SOLID GROWTH.

Florence is not undergoing any wild real estate boom. Its managers are not seeking to advance real estate prices. It is not their plan to get a quick return for the money they have invested, by the rapid sale of lots at unnatural prices. It is their aim to first build up a town, to locate factories and secure a permanent population, when land will have an actual value and sell at prices from which there will not be a subsequent disastrous reaction. At present real estate is much lower in price than in any other town in the South that has made half the progress Florence has made.

THIRTY NEW ENTERPRISES.

Within the last 12 or 15 months over 30 new industrial enterprises have been located at Florence, with an aggregate cash capital of about \$5,000,000. This remarkable growth is the result of efforts to induce people to simply investigate the attractions of Florence. Investigation and comparison with other places, on the part of any who are looking for a place in the South to locate, will in nearly every case result in the selection of Florence.

INDUSTRIAL ENTERPRISES IN OPERATION.

The following are some of the industries in Florence. Some of these are in operation; others are nearly ready for work and others have but recently commenced work on their buildings: One of the largest and best furnaces in the United States now in blast, and another under construction; a stove factory; a hardware company, with a capital of \$300,000, manufacturing fine building hardware, &c., the only factory of the kind in the South; a wagon factory, with capital of \$150,000; agricultural implement works; handle factory; woodenware factory; sash, door and blind factories; a cedar bucket factory; a pump factory; planing mills; a factory to make wooden butter plates such as grocers use; a flour mill; a cotton mill in operation, and a \$500,000 mill building and others projected; a jeans factory; a gingham factory; a woolen mill; a cotton gin; a marble company; a roofing and paint company; a shoe factory; a suspender factory; a compress, packet and ferry company; building and loan companies; a canning factory; brick factories; a dummy railroad company, and a number of other enterprises.

\$15,000,000 INVESTED.

The aggregate capital of the industrial, mercantile and development enterprises in Florence exceeds \$15,000,000.

A year ago the population of Florence was 2,000. It is now about 10,000.

There are more than 1,000 carpenters at work in Florence but they can't build houses fast enough to keep up with the increase in population.

INVESTIGATION AND INVESTMENT.

A number of the foremost capitalists and iron and cotton manufacturers, and others, of Philadelphia, Boston and other Eastern cities after a thorough personal investigation, have just made heavy investments aggregating several million dollars in Florence.

Florence, Ala.

Morristown, Tenn.

The Plateau City of the Great Valley of East Tennessee

is beautifully located on a plateau of Bay's Mountain, about equi-distant from the Cumberland Mountains which bound East Tennessee on the northwest, and the Alleghany Mountains which bound it on the southeast, and is 300 feet above Holston River, which washes the north base of the plateau three miles from the city. Its mean elevation above sea level is about 1,350 feet, while the hills and mountains immediately surrounding it rise to an altitude of 1,935 feet, affording views of surprising extent and grandeur, and at the same time so modifying the temperature that the thermometer rarely registers higher than 90° in summer or lower than 10° in winter. Its drainage is admirable, and malaria is unknown. It has nearly trebled its population since 1880, having now about 4,000 inhabitants. It is the commercial and business center of the richest and most extensive agricultural district in the State, where all the cereals and all the grasses

and tobacco are grown to perfection, and where fruits and berries abound. It has hundreds of thousands of acres of uncultured forests accessible to it, abounding in Poplar, Pine, Hemlock, six varieties of Oak, Chestnut, Hickory, Cedar, Maple, Birch, Beech, Sycamore, Gum, Locust, Laurel, Buckeye, Mulberry, Ash, Cherry and Walnut. The Celebrated East Tennessee Marble underlies a part of the city, and it is surrounded with rich deposits of Iron Ore, Manganese Ore, Zinc Ore and Lead Ore. It has been said by one who has made a study of the subject, that within a radius of 50 miles around Morristown every variety of iron ore in the United States can be duplicated, and a coke can be made equal to Connellsville coke. We claim without hesitation that Morristown has in its immediate vicinity richer mineral ores, and a greater variety of them, than any city on the Continent.

MORRISTOWN

has Railroad Facilities equal to any city between Lynchburg and Chattanooga, and they will be speedily increased by the completion of the Carolina, Cumberland Gap & Chicago Railway, making the shortest possible railway route between the great cities on the Ohio River, Cincinnati and Louisville, and the seaboard cities, Charleston, Port Royal and Savannah. Besides, the Baltimore & Ohio Railway will probably extend a branch to it from Lexington, Va., and the Tennessee Midland will in all probability be built to Morristown, and a line be built giving direct connection with Atlanta.



MAP SHOWING RELATION OF MORRISTOWN TO THE COUNTRY AT LARGE.

MORRISTOWN

has a citizenship composed almost exclusively of native born Americans. It boasts a splendid system of Graded Schools, Five Commodious Brick Churches, the finest Courthouse in Upper East Tennessee, an Opera House that will seat 600 people, two Solid Well Managed Banks, a flourishing Building and Loan Association, two of the Largest Commercial Flouring Mills in the South, Stone Works, an Agricultural Implement Factory, two Wood-working Factories, a Tobacco Factory, a Carriage and Wagon Factory, and many industries of lesser note.

It is lighted with electricity, and has water works under contract, and is now inaugurating a system of street railways. Its climatic advantages, its unsurpassed record for healthfulness, its abundance of pure water, its central and beautiful location, its transportation facilities, its fruitful agricultural surroundings, its contiguity to rich and exhaustless fields of iron, manganese, zinc and lead ores, marble, coal and timber, mark it as a place destined to be the commercial, manufacturing and railway emporium of Upper East Tennessee, Western North Carolina and Southeastern Kentucky.

To expedite this destiny the city authorities have wisely exempted from taxation for ten years all manufacturing establishments that will give employment to fifteen or more persons, and the county authorities have done the like, so that manufacturing establishments will be exempt from all taxation for ten years, except the merely nominal tax for State purposes. There has been no "boom" or inflation of prices at Morristown, and, as it possesses within itself and contiguous to it almost every element of wealth, it now presents the most inviting field for investment of any city in the South.

Persons who may desire fuller information can obtain it by calling on or addressing

MONTVUE LAND COMPANY

POSTOFFICE BUILDING, — MORRISTOWN, TENNESSEE.

FORT PAYNE, Alabama.

★ COME TO ★

The NEW ENGLAND CITY of the South.

Climate Unsurpassed. Abundance of Pure Water. Drainage Excellent.

No Better Point in the Union
For Safe and Profitable Investment.

Situated on the MAIN LINE of the QUEEN & CRESCENT ROUTE, fifty-one miles Southwest of Chattanooga, and ninety-one miles North of Birmingham.

Elevation is from 895 to 1,600 ft above the sea, and above fever districts.

DeKalb County is entirely free from debt; taxes light. Most liberal encouragement given to industries of every kind.

Iron Furnace and Rolling Mill will be constructed immediately, and other industries of various kinds are under contract.

Correspondence solicited from those who contemplate coming into the South to establish any kind of manufactories.

The different industries will employ at least two thousand skilled workmen, which will secure a population of over ten

thousand, independent of the many industries contemplated.

Iron of the best quality can be manufactured at as low cost per ton as in any other locality in the South.

Coal and iron are being developed rapidly of a superior quality.

Fine timber abundant and wood-working machinery of every kind can be profitably employed at this point.

The Company is prepared to give every reasonable encouragement to manufacturers who will locate at this point.

✍ Correspondence solicited.

CAPITAL \$5,000,000.

OFFICERS.

President, - - -	COL. J. W. SPAULDING
First Vice-President, -	HON. D. H. GOODELL
Second Vice-President, -	HON. HENRY B. PEIRCE
Secretary, - - -	C. L. T. STEDMAN
Treasurer, - - -	F. H. TOBEY
Manager, - - -	C. O. GODFREY

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HON. D. H. GOODELL, of Goodell Mfg. Co., Antrim, N. H.
 HON. HENRY B. PEIRCE, Secretary of State of Mass.
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 City, resides Fort Payne, Ala.

FORT PAYNE COAL & IRON COMPANY, Fort Payne, Ala.

200,000,000 TONS OF BROWN IRON ORE

IN SIGHT AT

BLUFFTON,

HIGH, HEALTHY AND HONEST.

GOOD PEOPLE AND GOOD WATER.

Cherokee County, Ala.

LOCATED UPON THE ALABAMA DIVISION OF THE EAST TENN. VA. & GA. RY. SYSTEM.

It is impossible to describe by words the enormous quantity of iron ore that is in sight on the land of this company. Said a prominent railroad man of the South: "I could not believe your statement as to the quantity, (200,000,000 tons in sight), but now that I have seen your ore deposits, I wonder how you put so low an estimate on them."

Prof. Robinson, of Bowdoin College, Brunswick, Maine, says: "I found at Bluffton iron ore in abundance, partly in solid cliff masses containing hundreds of thousands of tons, and partly in the form of gravel and small boulders lying in great banks similar in appearance to the gravel banks of New England. Whether there was as much of the gravel as of the bluff ore I could hardly judge, but it was very clear that the quantities of both were simply enormous."

G. S. Patterson, mining engineer, of Anniston, Ala., reports: "The amount of ore in sight was certainly beyond my expectation, though I was prepared to find a large deposit. The Bluff, as it is called, is a solid mass of ore on the side of a mountain, easily approachable, and can be mined cheaper than at any point in Alabama or Georgia, with which I am familiar."

Mr. Wm. H. Edmonds, of the Manufacturers' Record, says: "As to

the quantity of ore here, I don't suppose that all the furnaces in Alabama could use it up in a lifetime."—See Manufacturers' Record May 18, 1889 article entitled "BILL ARP AND BLUFFTON."

Ore can be delivered at furnaces built here at a cost not exceeding 50 cents per ton.

With high grade ores, analyzing over 50 per cent. metallic iron, delivered at the furnace at the above-named price, is there any possibility of such a place as Bluffton not being able to produce iron at figures which will yield a profit despite the dullest of dull times?

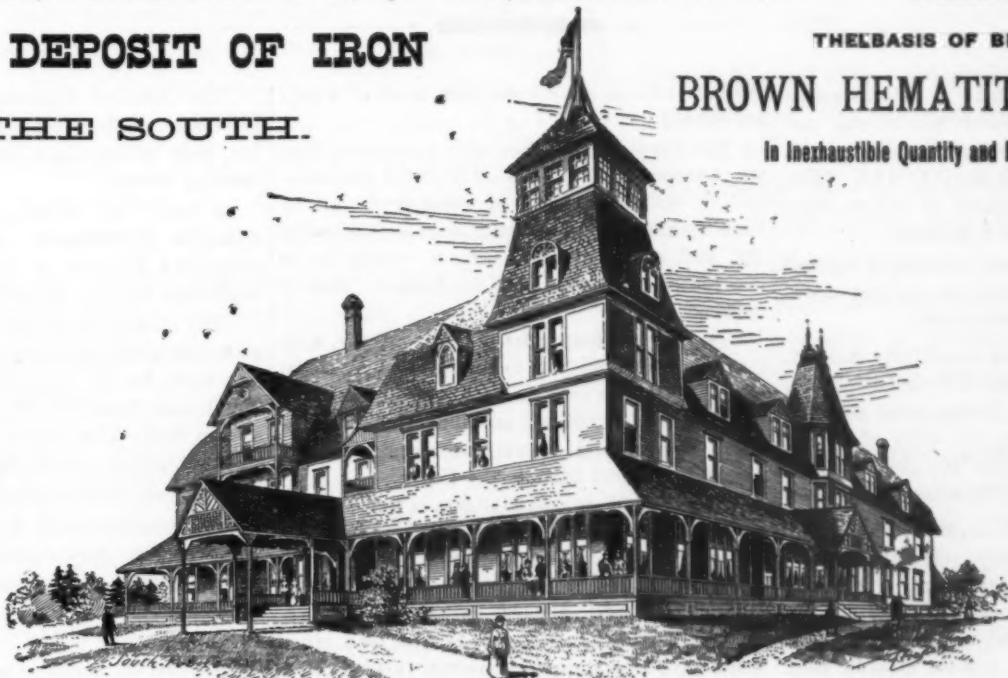
Prof. J. H. Pratt, of Birmingham, Ala., reports on samples selected from our property by Mr. Edmonds and Mr. G. S. Patterson as follows:

The sample of brown iron ore, marked "Bluff Ore," contains—	The sample marked "Gravel Ore" contains—
Metallic iron, - - 52.37 per cent.	Metallic iron, - - 53.23 per cent.
Phosphorus, - - - 0.782 "	Phosphorus, - - - 0.931 "
Silica, - - - - 14.60 "	Silica, - - - - 6.25 "
Water combined, - 8.10 "	Water combined, - 10.20 "
Moisture at 100° C - 2.50 "	Moisture at 100° C - 1.68 "

LARGEST DEPOSIT OF IRON

IN THE SOUTH.

Ore can be delivered at furnaces built here at a cost not exceeding 50 cents per ton.



THE SIGNAL—NOW OPEN AT BLUFFTON.

THE BASIS OF BLUFFTON:

BROWN HEMATITE IRON ORE

In inexhaustible quantity and excellent quality.

Located on the Selma Division of the East Tennessee, Virginia & Georgia Railway, midway between Rome and Anniston, and only two miles and three-fourths from the East & West Railroad, of Alabama.

FREE MANUFACTURING SITES.

Rich Manganese Deposit.

There are several very large and rich outcroppings of Manganese Ore on the company's property, and the deposits have been examined by experts and pronounced exceedingly valuable. Specimens have been sent to various steel works in Pennsylvania, and the result is a large inquiry about the ore. From present development can be seen several hundred tons of this ore. There is always a ready market for manganese, and it is quoted at \$18 to 20 per ton in Pittsburgh and Chicago. More extensive work will be done on these deposits within a very short time, as the banks are easily accessible. Shipments will soon be made.

OTHER RESOURCES.

Fire Clay and Brick Clay—Yellow Ochre.

On this property are large deposits of fire clay, which has stood the highest test. Shipments have been made to Chattanooga, Tenn., and it is pronounced a superior quality. A fire brick works could be established here that would prove extremely profitable.

In brick clay there is an inexhaustible quantity, with an abundance of water running through the clay land. Brick manufacturing here would pay handsomely, and the company would lease the clay beds for a term of years at a very low royalty.

The four charcoal pig-iron furnaces surrounding this property are nearly as valuable to this place as if they were located on the land of the Bluffton Company. The pig iron manufactured by them could be bought and utilized here for every kind of manufactured iron. They are so near that freight on the raw material would be comparatively nothing. Surrounding us, as these furnaces do, it makes Bluffton a centre.

SEND FOR PROSPECTUS. ADDRESS

Bluffton Land, Ore & Furnace Company, Bluffton, Ala.

DENISON, TEXAS.

The "Yankee" City of the Southwest,

— AND —

✱ GATEWAY ✱

— TO THE —

GREAT STATE OF TEXAS.

The City of Denison presents the Finest Opportunity of any City in the Southwest for the Investment of Capital in Large or Small Sums.

DENISON is situated in Northeastern Texas near inexhaustible beds of coal and iron, surrounded by the finest fruit lands in the world, and adjoining the INDIAN TERRITORY, which, in the nature of things, must in a few years be opened to settlement.

The growth of Denison has been a natural one, the city having reached its present size—16,800 population—in sixteen years.

The city is regularly and beautifully laid out. Railroads run from it in four different directions. The Missouri, Kansas & Texas alone does an enormous business, having 54 miles of switch track in Denison, employing 500 skilled workmen and disbursing \$150,000 a month in wages.

The first public school in the State was established here, and the city's elegant two and three story brick school buildings, surrounded by attractive grounds, are well arranged for the use of the white and colored children. Its schools are in session ten months in each year.

We have sixteen church societies, seven of which are colored.

The city is well supplied with pure water from its numerous private wells—dug in the ground—and its first-class system of water works, giving the citizens ample protection against serious loss by fire, and enabling the insurance companies to rate the city first class as to fire hazard. Rate of taxation low.

The city has four miles of street railway, with six miles now building to be operated by steam motor; has two electric light companies and a telephone plant. It has an influential New England colony, and counts among its citizens people from every State in the Union.

A large hotel, to cost \$125,000, is to be erected here this year, and a large steel plant with \$2,000,000 of capital is contemplated.

30,000 bales of cotton were shipped from Denison in 1888. 200,000 baskets of strawberries and several carloads of peaches and other fruits have been shipped to market this season.

The Denison Canning Co., capitalized at \$100,000, has just been organized, and ground has been broken for a large fruit and vegetable canning factory.

A cotton mill company is being formed with a capital of \$500,000. Denison citizens have subscribed \$150,000 to this enterprise; Eastern capitalists will add \$350,000.

The climate of Denison is magnificent, situated nearly 800 feet above sea level. In summer it is warm, but far cooler than many cities farther North, and from 6 P. M. until after sunrise it is always cool. The city is very healthy.

The capacity of the ice factory is being increased from a daily output of 15 tons to 30.

The Denison Land & Investment Co. is prepared to give every reasonable encouragement to manufacturers, and solicit correspondence from such manufacturers as contemplate coming into the Southwest to locate.

Address all communications to

THE DENISON LAND & INVESTMENT COMPANY,

DENISON, TEXAS.

Paid-Up Capital, - - - - - \$1,200,000.

OFFICERS:

W. P. RICE, President.

MILTON H. FRENCH, Vice-President and General Manager.

ARTHUR L. BERRY, Secretary and Treasurer.

DIRECTORS:

W. P. RICE, Kansas City, Mo.
J. M. FORD, Kansas City, Mo.
A. R. COLLINS, Denison, Tex.

B. J. DERBY, Burlington, Vermont.
PAUL LANG, Oxford, N. H.
M. V. B. CHASE, Augusta, Maine.

MILTON H. FRENCH, Thomaston, Maine.
A. H. COFFIN, Denison, Texas.
JOS. B. LINCOLN, Boston, Mass.

RANDOM NOTES ABOUT THE "MODEL CITY of the South."

THIS is the title bestowed upon Anniston, Alabama, at its beginning by persons who were impressed by the provisions its founders had made for the comfort and health of its future population, and the farseeing wisdom and judgment that entered into all the plans for its development. And it has amply maintained its right to the title. It has always been as its originators designed it should be—a model in every respect. This idea was incorporated in its foundation, and has been a part of its growth up to the present time.

Anniston is a town of about 12,000 inhabitants, and its population is rapidly increasing. Its numerous industries employ about 6,000 men, and pay out over \$60,000 a week in wages. It is one of the most beautifully located towns in America. Travelers who have visited it say that no more attractive site for a city could be found anywhere in the world. It is clean, sober, moral and healthful. It has churches, schools, water works, electric lights, gas, well-paved streets, handsome stores, fine residences and all the conveniences and attractions of a modern, well-appointed city. It is the industrial and commercial center of one of the richest iron districts in the world. It is surrounded by a splendid agricultural country. It has unsurpassed advantages for the manufacture of everything into which wood and iron enter. It possesses every attraction needed to make it a delightful place for a home or a health resort.

The one remark most frequently made in regard to Anniston is that it is a "solid town," and this is probably its most noteworthy feature. It has had no sudden, fictitious growth, no abnormal development, no unnatural stimulation to be followed by reaction and succeeding depression. Its development has been on a substantial and permanent basis. Manufacturers have been drawn here by the superior quality of Anniston iron, the abundance and cheapness of timber, and other natural advantages, as well as by its attractions as a place for a home. Its facilities and advantages as viewed from the standpoint of business are supplemented by its delightful and invigorating climate, its unsurpassed healthfulness and the beauty of its surroundings.

The following are analyses of the ores used by the Woodstock Iron Co.:

"REED'S BANK" ORE.		"SILVER CREEK" ORE.	
Metallic iron . . . . .	.60.02	Metallic iron	50.83
Phosphorus . . . . .	.08	Phosphorus . . . . .	.008
"WASHER BANK" ORE.			
Metallic iron	55.53		
Phosphorus . . . . .	.06		

There is one peculiarity of Anniston that is very strong in its favor—the fact that the larger part of the manufacturing capital invested here is local capital. The founders of the city didn't simply buy up some thousands of acres of land and then say to the world, "come and take advantage of the unexampled opportunities we offer, buy our stock, buy lots from us, establish manufactures." They first showed their faith in Anniston's advantages by investing here their own money. They built the furnaces, the cotton mill, the car shops, the car-wheel works, the water works, the Anniston & Atlantic Railroad, the Anniston & Cincinnati Railroad, etc. They built the splendid pipe-works plant that has just gone into operation, and the two new furnaces about to go into blast. As fast as they made money they have invested it right here.

Anniston is blessed with a delightful and healthful climate. It is never cold—the most delicate persons can spend the greater part of the time out of doors the year round. In summer the climate is not such as to debilitate and weaken, as is the case in the North and in less elevated localities in the South. The thermometer registers less heat, and even the same temperature is far less apprehensive here than where the percentage of humidity is greater. Its location in the mountains ensures an unfailing breeze, and no matter how warm it may be in the sun through the day, the nights are always cool. The climate seems particularly suited to those who are troubled with throat or lung diseases. A physician living near here, who had suffered for years with a severe bronchial trouble, states that he had lived in Southern California, Colorado, Florida, at Aiken, S. C., and in the South of France, and that the climate of none of these places did him as much good as that of Anniston has done. There are persons here now in vigorous health who believe they would not be living but for their removal to Anniston.

Mr. Albert Howell, of Atlanta, said recently in an interview in the Atlanta Constitution: "Anniston is the coming city. I was there last week. You cannot conceive the bustle and business of that wonderful city. Homes are being built as rapidly as possible, but the city has outgrown itself, and two thousand residences, if they were started at once, would be rented before completion. The other cities may blow and bluster, but Anniston is building, and in ten years will be the best city in Alabama. You mark this prediction."

INFORMATION ABOUT ANNISTON, MAPS, PROSPECTUSES, &c., &c., MAY BE HAD FROM THE

ANNISTON CITY LAND COMPANY, Anniston, Ala.

SOME SPECIAL CLAIMS

POSSESSED BY

LIBERTY, VA.

TO THE FAVORABLE CONSIDERATION of all classes of prospectors, whether for homes, for investment of capital, for health, or for business enterprise. With the ensuing scholastic year will be opened the superb building of the Randolph Macon Academy, of which a cut is herewith presented. This institution is built for the thorough culture of boys—mental, moral and physical—is under the efficient management of Prof. W. W. Smith, LL.D., president of the Randolph Macon College at Ashland, Va., and has been constructed regardless of cost, to secure every condition essential to the successful attainment of its objects according to the most approved modern standards. Such another educational institution does not exist in the broad limits of the Southern States. In addition to this two handsome Female Academies, constructed upon the same intelligent, liberal and progressive principles as the Randolph Macon Academy, will be built during the coming year, and, if possible, receive pupils in September, 1890. Besides these, Liberty already possesses

shipping facilities and all the climatic, social, sanitary and pecuniary conditions requisite to the retention of skilled artisans once engaged in their employment. The manufacturers of tobacco, woolen goods, etc., already established here have found the local advantages so great that they have refused every inducement offered them to move to other points.

Every reasonable concession will be made to parties seeking locations for the establishment and operation of manufacturing plants, and upon application to the undersigned specific information will be furnished as to all details, both regarding the natural merits of the location, the character of raw materials within easy access and the terms offered to *bona fide* prospectors for sites.

Few better opportunities have been offered investors in Southern properties than the lands immediately adjacent to Liberty—lands possessing the intrinsic merit of natural fertility and productiveness in addition to close proximity to an embryo city,



RANDOLPH MACON ACADEMY.
LIBERTY, VA.

the usual quota of public and private schools, for which progressive Southern towns are noted.

These institutions insure an intellectual and moral tone in its society to the residents of Liberty that must give it pre-eminent attractions over mere manufacturing centers to the best class of settlers.

As a special recommendation to investors, Liberty possesses all the advantages of close proximity to the ore beds and coal fields of the famous mineral region of Southwest Virginia, is the county seat of Bedford, itself an unexplored mine of mineral wealth, representing granite, limestone, steatite, kaolin, the hematite and magnetic iron ores, asbestos, mica, graphite, mineral paints, fire-clay, &c.

Manufacturers would find here, within easy access and at low cost, all the raw materials used in their business. Cheap labor in great abundance, cheap fuel, excellent

blessed with all the elements essential to steady and permanent growth. Some of these lands are already in the hands of improvement companies and have been laid out in beautiful, wide, shady avenues and divided in lots to meet the requirements of those desiring to build or to invest on a modest scale.

Liberty invites the closest scrutiny of its claims and does not require to indulge in extravagance or deception. Its growth is inevitable. With a superb climate, grand and imposing scenery, a surrounding country of great productiveness, invigorating mountain atmosphere, an unlimited supply of the purest free-stone water, unsurpassed healthfulness, good society and the finest schools for both sexes, enterprising and successful manufacturers, close proximity to the markets of the world, cheap labor, cheap lands, excellent shipping facilities, it lacks nothing but more people to make it a model city.

For information address

J. LAWRENCE CAMPBELL, Secty. Liberty Improvement Co.
R. KENNA CAMPBELL, Manager Longwood Park, Va.

CHARLOTTESVILLE, VA.

OFFERS

Great Advantages and Liberal Inducements to Manufacturers

DESIRING TO LOCATE SOUTH.

Railroad Facilities, Cheap Rates and Rapid Transportation to all Points Unexcelled.

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NEW DECATUR,

ALABAMA.

The New Industrial City of the Great Tennessee Valley.

BULLETIN OF PROGRESS.

NOVEMBER 11, 1889.

Railroads.

1. Grading contractors are at work changing the line of the Memphis & Charleston Railroad, so as to pass through the Union Depot at New Decatur. At present it passes through old Decatur only, a mile and a-half away. Grounds for a new freight depot and freight yards have been located in New Decatur.
2. The end of the track of the Decatur, Chesapeake & New Orleans Railway, a connection of the Chesapeake & Ohio system, is within twenty-five miles of New Decatur, and the engineers are locating the line to this point. Grounds for shops and freight yards have been donated them. The road will afford another northern and eastern outlet for New Decatur.

The River.

The first steamboat to pass through the famous obstruction to navigation on the Tennessee River, known as the Muscle Shoals, a few miles below New Decatur, was the "A. C. Conn." She made the trip through the government canals on the 5th instant. The river will be thrown open to navigation before January. The Land Company at New Decatur are building tracks to their new river dock landing to connect it with the railroads.

Freight Rates.

Heretofore New Decatur has been on an unequal footing with other towns in Northern Alabama as regards rates, but this discrimination has been completely remedied by a schedule of rates which goes into effect to-day on all the roads, giving New Decatur the benefit of the lowest rates from all points.

Industries.

1. The charcoal iron furnace, which was leased to the New "Decatur Iron, Land & Lumber Company" on October 22d, is being prepared for blowing in, and the necessary trestling and tracks are being built. The same company has leased the adjoining works of the Decatur Charcoal & Chemical Works.
2. The Decatur Car Wheel Manufacturing Company are making the alterations and additions necessary to double their working capacity, increasing it to 200 wheels daily.
3. The Decatur Lumber Company are expending \$40,000 in additional machinery and other improvements to increase their capacity.

New Buildings.

1. The new and handsome school building, of brick and stone, to cost \$20,000 is nearly completed.
2. The Westminster Presbyterian Church, one of four new churches being erected, was opened and formally dedicated on the 10th instant.
3. Building improvements, both business and private, are steadily going on. A handsome 5 store block, part of the north wing of the projected Casa Grande Hotel building, is completed, and the entire building (680 feet frontage) will be completed according to the original plans next year.

Other Improvements.

The town of New Decatur has placed an issue of \$30,000 of municipal bonds at par for the purpose of street improvements.

Projected Enterprises.

Negotiations will be closed this week for extending the system of manufacturers' switch tracks in New Decatur and forming them into a belt line.

Opening of the Tennessee River.

On November 12th the steamer "A. C. Conn" passed through the Muscle Shoals, on her way from Green Bay, Wisconsin, to Chattanooga. The river is therefore practically open to navigation, though it will not be formally opened for a few weeks. It was a notable trip. Her owners, formerly of Green Bay, but now of Chattanooga, started her from Green Bay to Lake Winnebago through the Fox River canal (built by the Government to connect Lake Michigan with Lake Winnebago), thence across the lake and up the upper Fox River to the Portage canal, thence down the Wisconsin, to Prairie du Chien, Wis., on the Mississippi, thence to the Ohio, thence up the Tennessee to the foot of Muscle Shoals, where she had to lay from May, 1888, until November, 1889. The cities of the Tennessee Valley, Knoxville, Chattanooga, New Decatur, Florence an Sheffield, and all intermediate points, are now, after many long years of labor and the expenditure of millions on the part of the Government, in the possession of cheap water transportation to all points of the Ohio and Mississippi and the Gulf of Mexico.

THE DECATUR LAND, IMPROVEMENT AND FURNACE COMPANY have prepared and will shortly publish for free distribution, a beautifully-printed and illustrated pamphlet of about 60 pages, of a convenient size for the pocket, entitled

"ON THE BANKS OF THE TENNESSEE."

containing 100 questions briefly but fully answered, about Alabama, Northern Alabama, the Valley of the Tennessee and New Decatur. It has been their endeavor to present in a compact, readable and attractive form all the information that may be sought by capitalists, investors, manufacturers in iron, wood or cotton, farmers, stock raisers or mechanics. It will be accompanied by a colored map of Northern Alabama, showing the counties of the Cereal Belt or Tennessee Valley, the iron ore and coal fields tributary to New Decatur, and its railway and river connections with all parts of the United States.

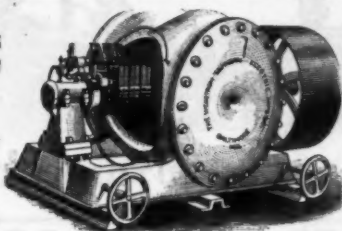
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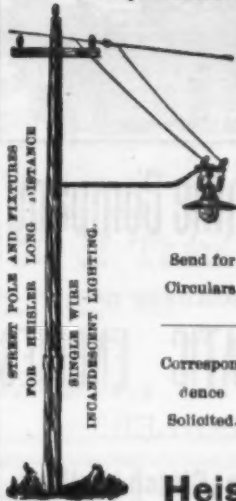
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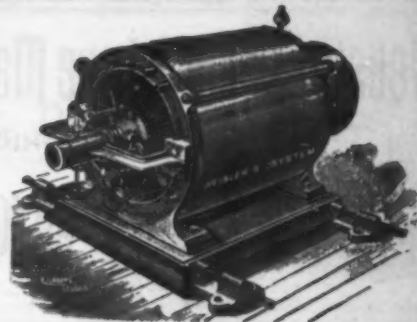
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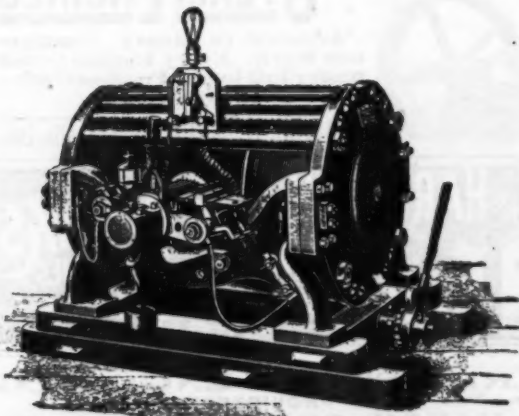
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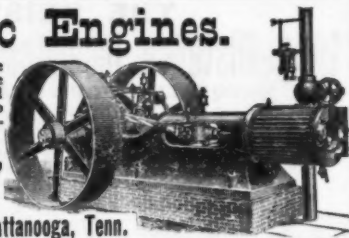
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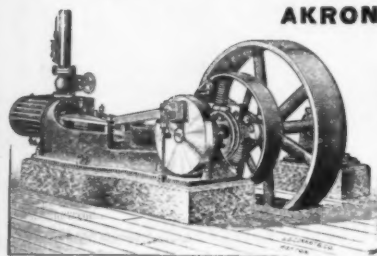
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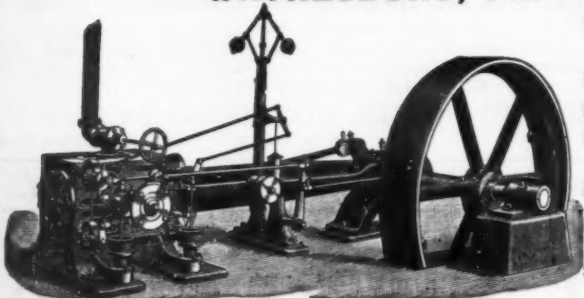


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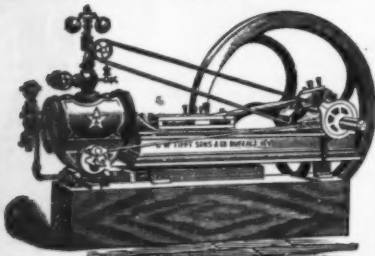
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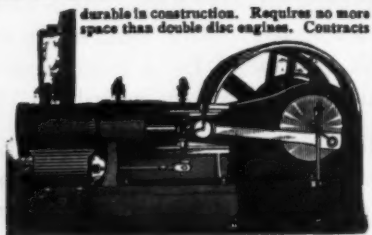
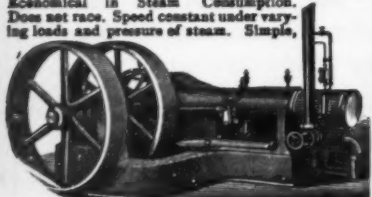
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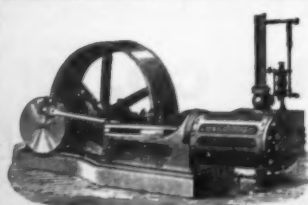


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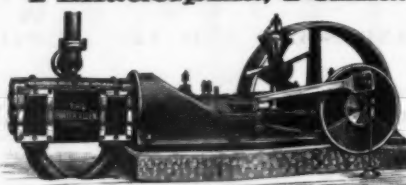
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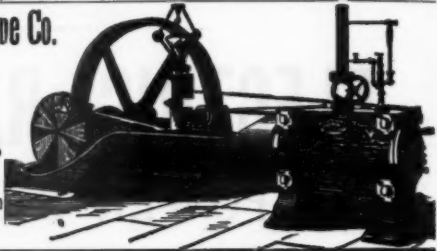
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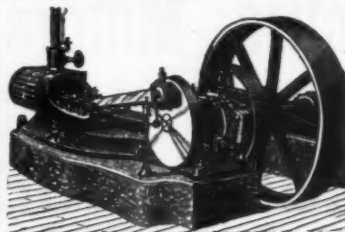
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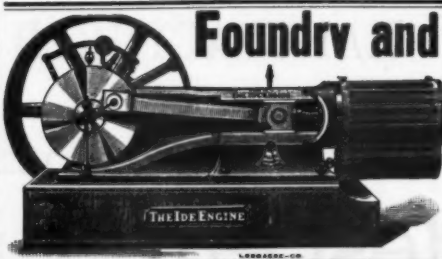
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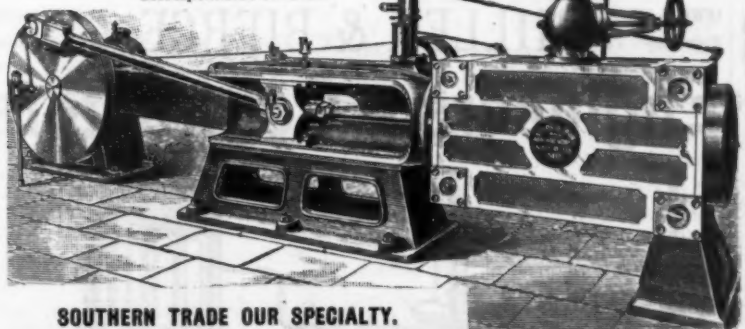
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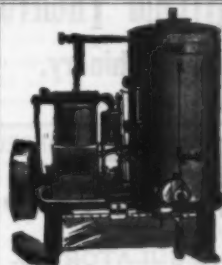
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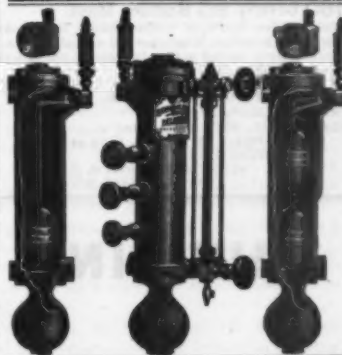
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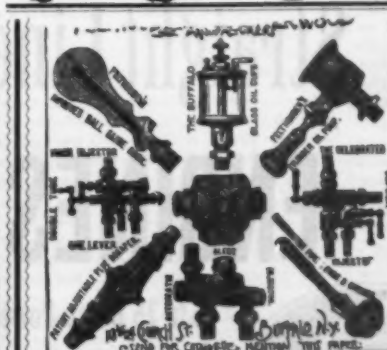


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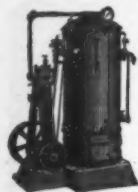
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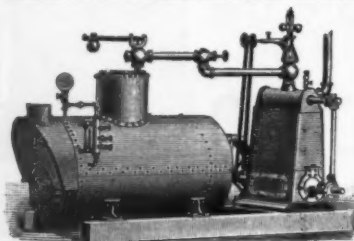
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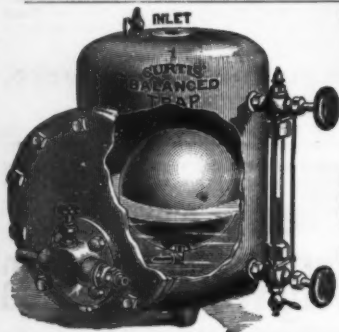
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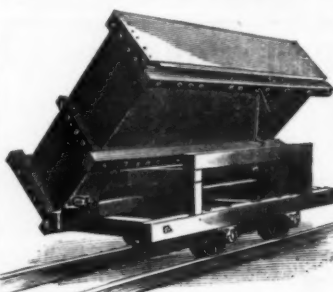
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Southern Railroads.

Harmony Between Towns and Railroads.

One of the most serious questions before nearly every growing town in the South is "How can we improve our railroad facilities?" The solution of this question is a difficult one in almost every individual case, not so much from the intricacy of the situation as from a feeling of suspicion. There is a feeling in every community that the railroad is its worst enemy. What would the community be without the railroad? Yet people are suspicious of it because it is a "soulless corporation." We are well aware of the fact that railroad corporations do not often make a public exhibition of "soul," yet when a town or city seeks better facilities for shipping and receiving freight, it is the most back-handed way possible to charge the railroad with being soulless, then demand great things from it, and follow up every attempt of the road to improve things by suspecting some sinister and evil motive. No railroad wants to deliberately crush a town with which it is doing business. Rather it seeks to build up that town.


When better and enlarged railroad facilities are demanded, let the local board of trade lay the whole matter concisely before the railroad officials, and then co-operate with them in every way to bring about the desired result, rather than be suspicious and fearful that some opportunity may be lost to squeeze a few cents out of the road. The idea that railroads are rolling in wealth, and prey to anybody who can bring suit against them on some flimsy pretext and filch a few of their dollars, has put all roads from necessity on the defensive. But if a representative body of men will formulate its scheme, then lay it before the officials, and both sides work in harmony, much will be saved in time, money and good feeling. Not a railroad in the South was prepared for this year's enormous business. Nor were the towns any better prepared. The consequence is shipments by freight are delayed from a variety of causes. Remedy must be sought immediately in the case of most towns at least, for the volume of business promises to be much greater next year than it has been this year. Let action be taken, then, looking to harmonious work with railroad officials and other much desired results will be more easily and more quickly obtained.

THE BALTIMORE MANUFACTURERS' RECORD of December 21 gives a magnificent presentation of the resources, development and prospects of the South. No one who has any interests whatever in this section should fail to read it carefully. The many valuable papers this number contains conclusively demonstrate that "Southward the course of Empire takes its way."—New Orleans Item.

A Great Scheme.

A measure is before the Virginia legislature which is nothing if not comprehensive in its scope. It is a bill to incorporate the Columbia Railroad & Navigation Co. The bill asks that the company be granted power to construct railroads, establish steamship lines, build ship-yards, docks, basins, elevators, transfers, lighters, steam tugs, etc., and shall have the right in Virginia to secure and establish terminals for its lines, to build ship-yards, mills, furnaces, and to operate and to construct railroads or canals connecting its works, but such connecting routes shall not exceed in length ten miles; also the right to acquire and hold stocks or bonds of any company chartered by any of the republics of South America, and to acquire and own the stock of any steamship company that may be incorporated to run between any port or ports of the United States on the Gulf Mexico or Atlantic Ocean to Bouranquilla or Carthagena, or any other port upon the Caribbean Sea; the capital stock to be not less than \$100,000,000 to be divided into shares of \$100 each. The undertaking is engineered by H. C. Parson who is a friend of Secretary of State Blaine, and Mr. Blaine is said to be financially interested in it. If such an undertaking were carried out it would be a great benefit to the South in many ways.

THE organization of a company to build a 150-ton Bessemer furnace at Greensboro, N. C., to be followed by other furnaces and steel rail mill, means a great deal for the railroads of that State. A furnace to produce 150 tons of iron a day will create about 800 tons of freight a day in the way of ore, coke, limestone and the iron that it makes out of these materials. Taking 300 days a year as the average time in blast, though furnaces do not shut down for Sundays, the total freight created by this one furnace will be 240,000 tons a year. That means 12,000 car-loads of freight, averaging 40,000 pounds to a car. The entire cotton crop of North Carolina is only about 100,000 to 110,000 tons in weight, so that this one Greensboro furnace will furnish double the amount of tonnage to railroads that the whole cotton crop of the State does. Then the building of this furnace means the beginning of North Carolina's iron and steel development and many other furnaces will follow. The railroads can well afford to take an active part in aiding the pushing of this the first enterprise of its kind in the State and of all others of a similar character.

 If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$4.00 a year.

Railroad Construction

Alexandria, Va.—Railroad.—The Alexandria & Fredericksburg Railroad Co. is building a freight station.

Asheville, N. C.—Electrical Railroad.—The West Asheville Improvement Co., mentioned elsewhere in this issue, will build a six-mile electric railroad to cost about \$15,000.

Atlanta, Ga.—Railroad.—J. B. Newcombe & Co. have purchased the Rome & Decatur Railroad, previously mentioned, at receiver's sale for \$832,000.

Atlanta, Ga.—Railroad.—T. L. & C. T. Houser, of Anniston, Ala., have received the contract of grading, pile driving and trestle building on the Georgia, Carolina & Northern Railroad, previously mentioned. The sum mentioned in the contract is \$100,000.

Baltimore, Md.—Railroad.—The Baltimore & Ohio Southwestern Railroad Co. has been organized by John K. Cowen, James Sloan, Jr., and others to take the place of the Cincinnati, Washington & Baltimore Railroad.

Birmingham, Ala.—Railroad.—Contracts for the construction of the three new branches of the Birmingham Mineral Railroad, previously mentioned, have been let to J. W. Worthington & Co. The branches aggregate 25 miles in length.

Birmingham, Ala.—Electrical Railroad.—It is rumored that the dummy lines recently mentioned as consolidated will be converted into electrical railways. W. A. Walker, Jr., can give information.

Charleston, S. C.—Railroad.—A bill has been introduced into the South Carolina legislature to amend the charter of the Summerville & St. John's Railroad Co. by allowing the company to extend its road from Summerville to Charleston and on to a point on the North Carolina line in Lancaster or Chesterfield counties.

Charleston, W. Va.—Railroad.—A meeting of the Elk Valley & Tide Water Railroad Co. will be held on January 9, 1890, for the purpose of organizing the company.

Colmesneil, Texas.—Tram-road.—The Yellow Pine Lumber Co. contemplates extending its tram-road three miles.

Cumberland Gap, Tenn.—Dummy Line.—The building of a dummy line to Cumberland Gap is talked of by the syndicate mentioned elsewhere in this issue as to lay off a new town 4 miles from this place.

Darien, Ga.—Railroad.—The Darien Short Line Railroad Co., R. K. Walker, president, states that it will at once build a line of road, 40 miles in length, from Darien to Walthourville, Ga. The company also contemplates in the future the extension of the road for about 60 miles in the direction of Atlanta, at the terminus of which extension a connection would be made to that city.

Elizabethton, Tenn.—Railroad.—The Watauga Valley Railroad Co. has been incorporated to build one railroad from a point on the Charleston, Cincinnati & Chicago Railroad to the Fork Ridge iron mines, and another from Hampton to near the Cranberry mines, N. C.

Eufaula, Ala.—Railroad.—It is reported that a railroad to Monroe, N. C., via Darlington, N. C., will be built. Darlington has offered \$200,000 to the projectors provided the road is built to Monroe.

Fernandina, Fla.—Railroad.—It is reported that the Florida Central & Peninsular Railway Co. will double-track its road to Dunnellon.

Greenville, S. C.—Dummy Line.—The construction of an electric railroad to Paris Mountain is contemplated. B. F. Perry can give information.

Hempstead, Texas.—Railroad.—A movement is projected to incorporate the Hempstead & Brazos City Railroad Co. to build a 90-mile road from Hempstead to the mouth of the Brazos river.

Jacksonville, Fla.—The Tropical Belt & Gulf Railway Co. has been incorporated to build a railroad from Cleveland to St. James City, with right to construct a branch to the Caloosahatchee river, near Fort Myers. Charles F. Todd, J. R. Campbell and James M. Kreamer are the incorporators.

Johnsonville, Ga.—Railroad.—Berrick & Co., of Detroit, Mich., mentioned elsewhere in this issue as to erect a saw mill, will, it is stated, build a logging railroad 30 miles in length.

Macon, Ga.—Railroad.—The Southwest Railway Co. has declared a dividend of 3½ per cent., payable after December 18.

Maxton, N. C.—Railroad.—The Maxton Lumber Co. contemplates the construction of the Little Bluff, Raemont & Maxton Railroad if a charter is secured.

Mebane, N. C.—Railroad.—The construction of a railroad from Mebane or Graham to Central Depot, Va., is being talked of.

Memphis, Tenn.—The entire property, equipment, franchises, etc., of the Prospect Park & Belt Railway Co. will be sold at public auction on January 7, 1890. Wm. Katzenberger, receiver, Memphis, will give information.

New Castle, Ky.—Railroad.—Bennett H. Young, the builder of the Louisville Southern Railroad, is said to contemplate the construction of a railroad from New Castle to Shelbyville.

New Orleans, La.—Electrical Railway.—The Crescent City Street Railway Co. has accepted the proposition, previously mentioned, of the Electric Traction & Manufacturing Co. to equip its line with storage battery cars.

Orange, Texas.—Railroad.—The Gulf & North-western Railroad Co. has been incorporated by H. J. Litcher, G. B. Moore, F. J. Drick, D. Call and others. The capital stock is \$1,000,000.

Paducah, Ky.—Railroad.—The Ohio & Mississippi Railway Co. (office, Cincinnati, O.) contemplates the immediate construction of an extension from Paducah to Mt. Vernon, Ill.

Palatka, Fla.—Railroad.—It is reported that another railroad may be built to Dunnellon independent of the Palatka & Anclote and Silver Springs, Ocala & Gulf Railroads, previously mentioned.

Parkersburg, W. Va.—Railroad Bonds.—The directors of the Baltimore & Ohio Railroad Co. (office, Baltimore, Md.) have authorized the lease and guarantee of the interest upon the bonds of the railroads previously reported, known as the Camden system, of which J. N. Camden is president. The bonds amount to \$3,500,000.

Parkersburg, W. Va.—Railroad.—Hon. J. N. Camden and other capitalists contemplate, it is stated, the construction of a railroad to Clifton Forge, Va., via the Little Kanawha and Elk rivers.

Richmond, Va.—Railroad.—The Bright Hope Railway Co. and the Farmville & Powhatan Railway Co. have been consolidated under the management of the latter company. James R. Werth is general manager of the new company.

Richmond, Va.—Railroad.—A bill has been introduced into the legislature to incorporate the Richmond, Petersburg & Alleghany Railroad Co., capital stock \$2,500,000, with authority to double the amount.

Richmond, Va.—Railroad.—A bill has been introduced into the Virginia legislature to incorporate the Columbia Railway & Navigation Co., with a capital stock of not less than \$1,000,000 or more than \$100,000,000. H. C. Parsons, Natural Bridge, Va.; Nathan Goff, West Virginia; V. D. Groner, of Norfolk, and Park Agnew, of Alexandria, are among the incorporators.

Richmond, Va.—Railroad.—The Pittsburgh & Knoxville Railroad Co. has been incorporated by the Virginia legislature. The road is projected to run from Pittsburgh, Pa., to Knoxville, Tenn., via Clinch river.

Richmond, Va.—Railroad.—A bill to incorporate the Fredericksburg & Valley Railroad Co. has been introduced into the Virginia legislature.

Richmond, Va.—Railroad.—The Richmond & Petersburg Railway Co. will double-track its road some time in the near future.

Roanoke, Va.—Railroad.—An election will be held on January 27, 1890, to decide whether the city of Roanoke will subscribe the \$100,000 previously mentioned to the Roanoke & Southern Railway Co.

Roanoke, Va.—Railroad.—The Norfolk & Western Railroad Co. contemplates constructing 11 miles of track for the extension of their lines through the Hyde Park addition.

Savannah, Ga.—Railroad.—The Central Railroad & Banking Co., of Georgia, desires proposals for furnishing rock for the purpose of ballasting track on the Savannah, Griffin & North Alabama Railroad, Upson County Railroad and the Milledgeville & Eatonton Railroad. C. E. Marvyn, road master, can give information.

Savannah, Ga.—Railroad.—It is stated that the Savannah, Florida & Western Railroad Co. will double-track its lines from Southover to Central Junction.

Saville, Fla.—Railroad.—It is rumored that a 10-mile railroad will be constructed to Astor.

Tallahassee, Tenn.—Railroad.—John B. Thompson has received the contract for constructing the Cincinnati, Alabama & Atlantic Railroad, previously mentioned, from Somerset, Ky., to Huntsville, Ala.

Winchester, Ky.—Railroad.—The railroad to Scottsboro, Ala., previously mentioned and also referred to elsewhere in this issue, will probably be built. The charter of the Tennessee & Alabama Land, Mining & Railroad Co. has been sold to W. E. Dabney, of Birmingham, Eng., representing a syndicate, which contemplates the construction of the proposed road.

Winston, N. C.—Electrical Railway.—It is stated that a syndicate of Northern capitalists have purchased the plant of the Winston Electric Light Co. and will shortly build a two-mile railroad.

Yazoo City, Miss.—Railroad.—The Louisville, New Orleans & Texas Railroad Co. (office, Memphis, Tenn.) has surveyed the route of a proposed road from Vicksburg to Yazoo City, and put a part of it under construction.

The Flow of Population South.

BY JACOB REESE.

[For the MANUFACTURERS' RECORD.]

Thirty years ago the population of the United States and territories was 31,443,321, and now is fully doubled, although during this time the civil war depleted the number fully 5,000,000. In thirty years from now, 1920, the population will be fully 125,000,000. The last thirty years the flow of population was westward through Minnesota, Dakota, Montana, Wyoming, Colorado, Utah, Nevada, Idaho, California, Oregon, and Washington Territory. Some going even to Kamchatka. They have spread out on the left to the borders of Mexico, and on the right have overrun the lines of the British possessions.

This great tide of population has been flowing West for the last thirty years, and has dropped more than 15,000,000 people along its path. They have absorbed the fatness of the land, and the tide with great force has swung around to the left and has already passed through New Mexico and the Indian Territory, and is now spreading its industrial bursts over the rich plains of Mexico.

While this Western current of population is marching eastward another current is flowing southward through the Virginias, Tennessee, Carolinas, Georgia and Alabama. So that the South is now enjoying two great currents of population, which, when they meet, will form such a flood-tide as will boom the South from the Potomac to the Rio Grande.

This great army that moves the center of population, and is now marching southward, contains some of the most eminent men of the age. Scholars in literature, masters of physics, experts in science, and versed in the industrial arts. Lawyers, doctors, ministers and inventors. They go to stay; their object is to possess the land. During the next thirty years the population of the South will be increased more than 40,000,000. They will bridge the rivers, tunnel the mountains and railroad the plains like cobwebs. They will swarm in the valleys, climb the hills, build towns and scatter industrial shops wherever they go. They will develop the mines, smelt the ores, convert the metal into useful forms, and will make more steel in the South the next thirty years than has been made in all this country the last thirty years. The leaders of this great industrial host feed on the fat of the land. They are intellectually, physically and financially strong, and may be seen riding through the South in palace cars upholstered like unto the palaces of the gods.

Yes, within the next thirty years more than 40,000,000 souls will find a home in the South—40,000,000 more than live there now. Let the issues of the past go with the men who made them. A new era has dawned upon the South; let every person awaken and enjoy themselves, for there is music in the air, and all business enterprises judiciously managed will pay, and the whole country will glow with prosperity as the years of the next decade come and go.

PHILADELPHIA, December 24, 1889.

[Special Dispatch to MANUFACTURERS' RECORD.]

MIDDLESBOROUGH, KY., Dec. 20, 1889.

C. R. Boyd, mining engineer, inspected the American Association ore drifts at Cumberland Gap, on 14th December, and reports at that date one hundred and ninety-nine feet of ore, with stratification dipping northwesterly under Cumberland mountain. Mr. Boyd claims the showing of ore to be prodigious. ARTHUR.

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises and needing machinery or supplies of any kind will find it profitable to consult the advertising columns of the MANUFACTURERS' RECORD. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

COL. T. M. R. TALLCOTT, who has been first vice-president of the Richmond & Danville Railroad Co., with supervision and direction of the traffic business of the line since September, 1888, has resigned, and his resignation has been accepted, to take effect January 1. The board met in New York Saturday and elected Wm. G. Ackman, of New York, first vice-president; A. B. Andrews, of North Carolina, second vice-president, and J. W. Johnston, of the Georgia Pacific, third vice-president. Major Peyton Randolph will remain general manager, with office in Washington, and Mr. Sol Haas will have entire control of all traffic.

ONE year ago the railroad receipts at Fort Payne, Ala., averaged about \$15,000 a month. Now they run from \$20,000 to \$35,000 a month. That tells the tale of increasing prosperity of Southern railroads.

THE Lodge & Davis Machine Tool Co. will open to the public on January 1, 1890, at 64 Cortlandt street, New York, a new store for the exhibition and sale of their improved iron and brass working tools, where they will carry in stock a full line of all the machinery manufactured by them. This they claim is due to the great success they have had with their Chicago store since its opening, March 1, 1889, and the increased demand for their tools in the East. The New York store will be under the management of Mr. H. W. Harrison, late of E. P. Bullard, who has a thorough and perfect knowledge of machine tools, and an extensive acquaintance with the manufacturing interests of this section of the country. With great business foresight this firm has enlarged its capacity and has been far-reaching, and thereby has a large and active trade all throughout the United States. They have recently added considerable to their works at Cincinnati, and are now able to produce a large quantity of their goods. The introduction of progressive ideas in their tools, together with the fact of building them on sound mechanical principles, has made the demand so large that the output of this firm is ever greater.

A BIG HARDWARE FACTORY—FLORENCE, ALA., Dec. 21, 1889.—We will erect a large plant at Fort Payne, Ala., for the purpose of manufacturing builders' hardware of all description. We will be in the market for elevator, steam plant, boiler and cupola. We shall have buildings as follows: One brick three-and-a-half story 50x150 feet finishing factory, one brick one story 40x50 feet boiler and engine-house, one brick one-story 40x60 feet brass foundry, one brick one-story 30x50 feet fire-proof vault, one iron one-story 50x150 feet iron foundry, one iron one-story 40x100 feet rolling and japan room, one iron one-story 35x45 foundry storehouse, one iron one-story 40x75 general storehouse, one iron one-story 20x30 pump-house. FOSTER HARDWARE MFG. CO. F. H. FOSTER, President.

NEW FACTORIES AT MIDDLESBOROUGH—MIDDLESBOROUGH, KY., Dec. 16, 1889.—A furniture factory, \$75,000 capital; a casket or burial case factory, \$75,000 capital, and a bent-wood works, \$30,000 capital, have been located here. Parties are on the ground seeking to locate a wire mill and a steel wire nail mill. J. M. BROOKS.

LOUISVILLE, KY., Dec. 20, 1889.—I am engaged in the effort to organize a company to build and operate a rolling mill to make light sheet and "fire bed" iron and steel wire. Hope to have necessary capital subscribed next month, and will be in market for latest improved machinery. BARRY COLEMAN.

A BIG ICE FACTORY—NEW ORLEANS, LA., Dec. 19, 1889.—We intend to erect another ice factory, capacity 100 tons daily, but the plans, etc., are not yet complete, and we cannot yet describe the works. CONSUMERS' ICE CO.

Southern Financial News.

NEW BANKS.

Amarillo, Texas.—The First National Bank of Amarillo has been chartered.

Anniston, Ala.—It is stated that W. F. Witham is organizing a bank.

Ballinger, Texas.—The Runnels County Bank has merged into the Ballinger National Bank. S. P. Gray is president.

Bennettville, S. C.—The Farmers' Bank has applied for a charter.

Bessemer, Ala.—The First National Bank of Bessemer, previously mentioned, has been organized with C. Berney, president, and T. J. Cornwell, cashier.

Bristol, Tenn.—Another new bank has been organized.

Brunswick, Ga.—The First National Bank, previously mentioned, contemplates increasing its capital stock from \$110,000 to \$165,000.

Byhalia, Miss.—A branch of the Mercantile Co-operative Bank has been organized with J. L. Spinault as president.

Charlotte, N. C.—D. A. Thompson, W. M. Wilson and others contemplate starting a bank with a maximum capital of \$500,000.

Childress, Texas.—It is reported that Denver (Col.) capitalists contemplate starting a national bank.

Dallas, Texas.—The Bankers & Merchants' National Bank, previously mentioned, has been organized with W. J. Keller, president, and H. Hanks, cashier; capital stock \$500,000.

Denison, Texas.—It is reported that the City Bank of Sherman, Texas, will start a branch.

Fayetteville, Ark.—A new bank has been started.

Franklin, Ky.—G. H. Patterson, C. F. Potter and others will organize the Farmers' Bank with a capital stock of \$100,000.

Gallatin, Tenn.—S. D. Hickman and W. R. French, of Tullahoma, Tenn., are taking steps to organize a national bank.

Greensboro, Ala.—An alliance bank is being organized.

Hawthorne, Fla.—A bank will probably be started shortly.

Itasca, Texas.—R. P. Edington, of Hillsboro, will start a bank.

Knoxville, Tenn.—The Holston Banking & Trust Co. will organize about January 15, 1890, with a capital of \$100,000. H. M. Aiken is president.

Macon, Ga.—Union Savings Bank & Trust Co. has been organized with a capital of \$100,000.

Madison, Ga.—The Bank of Madison has been started with G. B. Stovall, president.

Middlesborough, Ky.—It is reported that Watertown, Dak., parties will organize a loan and trust company.

Montgomery, Ala.—The National Bank of Montgomery has been organized with a capital stock of \$100,000.

Ozark, Ala.—J. R. Crawford is said to contemplate starting a bank.

Richmond, Va.—A bill has been introduced into the Virginia legislature to incorporate the Mechanics' Bank of Richmond with a capital stock of not less than \$50,000 or more than \$1,000,000. E. J. Warren, F. Sitterding, A. L. Phillips and others are the incorporators.

Starke, Fla.—The Bradford County Bank has been organized.

Toccoa, Ga.—The bank previously mentioned as contemplated has been organized.

Tampa, Fla.—The organization of another bank is being agitated.

Washington, D. C.—A movement is being made to establish the Merchants & Traders' National Bank with a capital of about \$250,000.

Westminster, Md.—The Peoples' Loan & Savings Bank of Carroll County has been incorporated with a capital stock of \$10,000. D. D. Bousack is president and J. H. Cunningham, treasurer.

A dividend of 3½ per cent., payable after December 18, has been declared by the Southwestern Railroad Co. (office, Macon, Ga.)

Albany, Ga.—The city has refused to issue the \$50,000 of bonds previously mentioned for the purpose of constructing a sewerage system.

Baltimore, Md.—The Canton Co. will expend \$75,000 in purchasing shares of its capital stock. Offers will be received until January 21, 1890.

Dawson, Ga.—Terrell county having refused to issue bonds to build a new courthouse, another election will be held on account of a failure to comply with the law in advertising the first one.

Dyersburg, Tenn.—An election will be held to decide as to whether Dyersburg shall appropriate \$35,000 to secure the construction of the Kansas City, Dyersburg & Birmingham Railroad.

Eminence, Ky.—An effort is being made to have Eminence issue requisite bonds for the purpose

of erecting fire-engine houses and buying equipment.

Hampton, Va.—Elizabeth City county will issue bonds to build the bridge mentioned elsewhere in this issue.

Little Rock, Ark.—The Athletic Association will issue \$5,000 of 8 per cent. bonds to be redeemed after two years.

Montgomery, Ala.—The Commercial Fire Insurance Co. has declared a dividend of 10 per cent.; the Bank of Montgomery one of 8 per cent., and the Capital City Insurance Co. one of 5 per cent.

Negotiations are pending between the Baltimore & Ohio Railroad Co. (office, Baltimore, Md.) and the company (J. N. Camden, president) which owns the so-called Camden system of roads, for a lease and guarantee of the latter's bonds, amounting to \$3,500,000, by the former company.

New Orleans, La.—The New Orleans National Bank has declared a semi-annual dividend of \$15 a share, payable after January 1, 1890.

Norfolk, Va.—The Norfolk & North Carolina Bond Co., mentioned elsewhere in this issue, will issue bonds; amount not known.

The Bessemer & Birmingham Railroad Co. (office Birmingham, Ala.) will hold a meeting on January 18, 1890, to decide as to the issuance of bonds to an amount not to exceed \$300,000, and also as to the advisability of increasing the capital to not more than \$400,000.

The Granite Perpetual Building Fund Co. has declared a semi-annual dividend of 4½ per cent., payable after January 1, 1890.

The Nitro-Phosphate Co., Limited, of London, England, mentioned elsewhere in this issue as to establish chemical works at Norfolk, Va., has issued \$50,000 of bonds.

The Richmond & Petersburg Railroad Co. (office, Richmond, Va.) has declared a dividend of 3½ per cent., payable after January 3, 1890.

The Tennessee Coal, Iron & Railway Company (office Nashville, Tenn.) has declared a semi-annual dividend of 4 per cent. on preferred stock.

Thomas Branch & Co., Richmond, Va., offer for sale \$500,000 Equipment Sinking Fund 5 per cent. bonds of the Richmond & Danville Railroad Co.; the principal payable September, 1899.

Troy, Ala.—The Troy Fertilizer Co., it is reported, has declared a dividend of 15 per cent. for the past year.

Troy, Ala.—Since November, 1888, the Troy Telegraph Co. has declared a dividend of \$60, which is at the rate of 120 per cent.

Westminster, Md.—It is rumored that the Guarantee Trust Co. is to be formed with a capital of \$100,000.

Vienna, Ga.—Dooly county has refused to issue bonds to build a courthouse.

West Point, Va.—The Richmond & West Point Terminal Railway & Warehouse Co. has declared a semi-annual dividend of 2½ per cent. on preferred stock.

Wheeling, W. Va.—The Junction Iron Co. has declared a dividend of 10 per cent.; the Jefferson Iron Co., a dividend of 1½ per cent.; the Benwood, one of 5 per cent., and the La Belle Mill, one of 5 per cent.

WANTS.

WANTED correspondence with a reliable and practical SOAP MAKER capable of taking charge of a factory. Address MOORE, HULL & CO., Savannah, Ga.

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WANTED.—A position as Bookkeeper or clerk by a young man 25 years of age, who has filled the two positions together for six years in the hay, grain and retail lumber business. Good plain writer. Best of references furnished. Address BOOKKEEPER, Box 77, Port Deposit, Md.

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TO THE STOCKHOLDERS

OF THE

Atchison, Topeka & Santa Fe Railroad Co.

In April last we asked you to intrust to us your proxies, to be used at the annual meeting of the company in May. This resulted in a change of management, the introduction of reforms and economies, and a financial reorganization of the company that has met general approval.

During the progress of this reorganization it has been frequently suggested in the public press, and by numerous and large holders of the company's securities, that it would give greater stability to the reorganized company, if a management committed to the successful working out of the plan of reorganization, and absolutely in the interest of the property, could be secured for several years.

Consulting our own inclination and convenience, we would prefer to leave the management of this great property to others; but we recognize the force of the suggestion and the necessity for some such arrangement, and, as many shareholders believe that great advantages are likely to result to the holders of all classes of the company's securities from such co-operation, we have consented to act in the matter.

Holders of Stock of the Atchison, Topeka & Santa Fe Railroad Company may deliver their certificates, assigned upon the back in favor of George C. Magoun, Thomas Baring, Oliver W. Peabody and John J. McCook, to the BOSTON SAFE DEPOSIT AND TRUST COMPANY, 87 Milk Street, Boston, subject to an agreement that the title to such Stock and the voting power thereon shall be vested in our nominees or their successors; also to be named by us, for ten years, or until July 1, 1900.

The Trust Company will issue Stock Trust Certificates, entitling the holder to all the beneficial interests and advantages belonging to or growing out of the deposited shares, and to the return of a like number of shares when the term of the trust has expired, unless the same shall be further extended by the respective parties in interest.

Applications will be made to have the Trust Certificates above referred to listed upon the New York, Boston and London Stock Exchanges.

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BOSTON, DEC. 16, 1899.

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Baltimore Stock Exchange Quotations.

Reported by ALEXANDER BROWN & SONS, Bankers, Baltimore.

BALTIMORE, Dec. 26, 1899.

	BID.	ASKED.
N. Carolina 4's Consols C.	97 1/2	98
Virginia 5's Consols C.	40 1/2	41
Virginia 3's new	67 1/2	68 1/2
Virginia Consul Coupons, N. F.	20	21
Norfolk Water 8's, C.	126	127
Atlanta & Char. Income 6's	104 1/2	105 1/2
Cape Fear & Y. Valley 6's, A.	103	104 1/2
Col. & Green. 2d, 6's	82	83
Ga. Car. & N. 5's	105	106
Ga. Pacific 1st, 6's	113 1/2	114 1/2
Ga. Pacific 2d 5's	80	81 1/2
N. W. Nor. Car. 1st 6's, C.	102	103
Va. Midland, 3d, 6's	111 1/2	112 1/2
Va. Midland, 5th, 5's	100	101
Wil. Col. & Aug. 6's	113 1/2	114 1/2

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*Means machinery is wanted, particulars of which will be found in "Machinery Wanted" columns.

†In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Anniston—Rolling Mill.—The capital stock of the company mentioned in last issue as to be organized to build a rolling mill will be \$150,000. Work is expected to begin on a 50-ton mill for car and merchant iron early in January. Robert Frazer can give further particulars. His address for the present is Warrenton, Va.

Anniston—Sewerage System.—J. D. Hunter has not as yet completed arrangements to prepare plans for the sewerage system at Bluffton and Fort Payne, mentioned in last issue.

Bessemer—Dynamite Works.—The Standard Dynamite Co., lately mentioned as incorporated at Chattanooga, Tenn., has works at Bessemer.*

Bessemer.—Hon. Abram S. Hewitt, of New York city, writes to the MANUFACTURERS' RECORD that there is no foundation for the report that Cooper, Hewitt & Co. were negotiating to purchase all the property owned or controlled by the De Bardeleben Coal & Iron Co.

Birmingham—Cotton Tie Factory.—J. N. Whitman will locate a factory in Birmingham for the manufacture of his patent steel hoop and cotton ties if given sufficient inducements.

Birmingham—Electric-light Plant.—The Birmingham Gas & Electric-light Co., previously reported as to improve its plant, will put in a 50-horse Thomson-Houston dynamo.

Birmingham—Steel Plant.—Ernest Porchaska has gone to Germany to investigate the methods in use there in the manufacture of steel for a New York syndicate which contemplates locating a basic steel plant in Birmingham. It is stated that if he reports that steel can be successfully made from Alabama ore, work on the plant will be commenced shortly.

Birmingham—Lumber Mill.—Dean & King, reported in last issue as to put a new boiler in their lumber mill at King's Station, may also put in an edger and lath machine and expect to erect another saw mill about March 1, 1890. Their office is 201½ 2d avenue.

Birmingham—Iron Furnace.—The Vanderbilt Steel & Iron Co. has commenced work on its iron furnace lately mentioned. The company has let contract for lumber for heavy trestle work to the Birmingham Lumber Co.

Blount—Coke Ovens.—The Cahaba Coal Mining Co., lately mentioned as opening new mines, is building a new double battery of about 150 coke ovens.

Calera—Publishing.—A newspaper is to be published.

Courtland—Telephone Line.—The United States Government will, it is stated, construct a telephone line from Milton's Bluff at Mussel Shoals locks to the mouth of Shoal creek, 23 miles.

Eufaula—Cotton Mill.—The Eufaula Cotton Mills will meet January 6, 1890, to consider the increase of its capital stock lately mentioned.

Eufaula—Grist Mill.—B. B. Comer and W. N. Reeves will erect a grist mill.*

Florence—Rolling Mill.—W. A. Hudson, president of the Florence Cotton & Iron Co., reports that work will commence within 90 days on the \$300,000 rolling mill lately mentioned.

Florence—Iron Furnace.—The Florence Cotton & Iron Co. will commence work at once on the completion of the W. B. Wood iron furnace, lately mentioned. The name will be changed to the Philadelphia Furnace. The foundation has been laid.

Florence—Sewerage System.—Wade Allen, chairman of committee, will receive plans and specifications for constructing the sewerage system previously reported.

Fort Payne—Asphalt Works.—The Trinidad Asphaltum & Block Pavement Co. has broke ground for its asphalt works lately mentioned. J. H. Mendall is superintendent.

Fort Payne—Sash, Door and Blind Factory.—The De Kalb Lumber Co. has been organized with W. P. Rice, president; A. C. Spaulding, vice-president, and J. G. Rice, secretary, to succeed Hatch, Spaulding & Co. The company intends erecting a large sash, door and blind factory. The capital stock is \$30,000.

Fort Payne—Electric-light Plant.—The Fort Payne Electric-light, Power & Heating Co. will not enlarge its plant, lately mentioned, at present.

Fort Payne—Rolling Mill and Steel Plant.—The Fort Payne Rolling Mill Co. has let contract for its steel blooming mill previously reported, and also for a nail plate mill to Totten & Hogg Iron & Steel Foundry Co., of Pittsburgh, Pa. Gogin & Robinson have the contract for the open hearth steel plant.

Fort Payne—Hardware Factory.—The F. H. Foster Manufacturing Co., lately reported as to move a large Western hardware factory to Fort Payne, will erect the following buildings: A finishing factory, 3½ stories, 50x150 feet; boiler and engine-house, 40x50 feet; brass foundry, 40x60 feet; fire proof vault, 30x50 feet; iron foundry, 50x150 feet; rolling and jannanning foundry, 40x100 feet; foundry store house, 35x45 feet; general storehouse, 40x75 feet, and pump-house, 20x30 feet. A site has been selected. The company will also manufacture door knobs from Fort Payne kaolin.

Fort Payne.—A Chamber of Commerce will probably be organized.

Gadsden—Electric-light Plant.—The Queen City Electric-light Co., lately mentioned as to add another dynamo, has increased its capital stock \$5,000.

Hazen.—Kirkpatrick & Coleman will rebuild their grist mill and cotton gin lately reported as burned, and add a saw mill.*

Helena—Rolling Mill.—It is stated that estimates are being prepared for the construction of the rolling mill of the De Bardeleben Coal & Iron Co., of Bessemer, lately reported (by mistake under Oxford.)

Huntsville—Fertilizer Factory.—A fertilizer factory is reported as to be started.

Huntsville—Machine Shop.—It is stated that a new machine shop will be erected.

Huntsville—Creamery.—J. G. Reist, of Mount Joy, Pa., states the report referred to lately that he would establish a creamery in Huntsville is a mistake.

Mobile—Dry-dock.—The Gulf Dry-dock Co. will build the dry-dock referred to in last issue. It is to be an excavated or Graven dock.*

Orrville—Grist Mill and Gin.—Lovett & Rogers will probably soon rebuild their grist mill and cotton gin previously reported as burned.

Orrville—Oil Mill and Fertilizer Factory.—Efforts are being made to erect a cotton-seed oil mill and fertilizer factory.

Russellville—Iron Mines.—Alfred Parish, of Philadelphia, Pa., president of the Birmingham, Sheffield & Tennessee River Railroad Co., has purchased, it is reported, the iron ore property of W. W. Littlejohn.

Selma—Cotton Mill.—The \$15,000 bonds lately mentioned as to be issued by the Matthews Cotton Mill Co. are for the improvement of its cotton mill.

Sheffield—Machine Shops.—Contract for erecting the buildings for the shops of the Sheffield Machine Co., mentioned in last issue, was let, it is reported, to Gallion & Co., of Knoxville, Tenn. J. T. Crass, of Decatur, has contract for grading.

Sheffield—Electrical Works.—The Hall & Edwards Electric Co. has been organized with E. A. Edwards, president, and J. V. Allen, secretary, to manufacture electrical appliances. The company will meet January 18, 1890, to consider the issuance of \$125,000 of bonds.

Sheffield—Car Works.—Negotiations are pending for the removal to Sheffield of a plant for the manufacture of tram cars and mining and furnace supplies to employ 1,000 men. The Sheffield Coal, Iron & Land Co. can give information.

Sheffield—Machine Works.—It is stated that contract has been closed with Ohio parties for the erection of machine works to have a capital stock of \$125,000 and to employ 150 men. The Sheffield Coal, Iron & Land Co. can give particulars.

Sh field—Rolling Mill.—\$180,000 have been subscribed of the \$200,000 required to build the rolling mill previously reported. It is proposed to build a 100-ton mill. The Sheffield Coal, Iron & Land Co. can give information.

Thomas—Iron Furnace.—The Pioneer Mining & Manufacturing Co. expects to have its new iron furnace now in course of construction ready for blast about January 31, 1890.

Tuscaloosa—Coal and Natural Gas.—Friedman & Loverman are prospecting for coal and natural gas on their property near Windham Springs. They have also sunk a sulphur artesian well.

Union Grove—Saw Mill.—N. Williams has purchased, it is reported, the saw mill of Barnard, Nearen & Redmond.

ARKANSAS.

Buffalo City (P. O. at Toney)—Concentrating Plant.—Maxfield Curtis and others, of Batesville, are making arrangements for the erection of a crushing and concentrating plant at their mines near Buffalo City.

Buffalo City (P. O. at Toney)—Mining.—R. M. Johnson, of Fort Smith, has purchased mining property opposite Buffalo City and will, in the near future, erect a crushing plant.

Camden—Saw Mill.—The Lester Lumber Co., operating a saw mill near Camden, has recently been incorporated.

Camden—Ice Factory.—S. O. Sevier, president of the Camden Water Works Co., has let contract for the ice factory lately mentioned.

Fort Smith—Brick Works.—W. A. Doyle, who has the contract for paving Garrison avenue, and who sublet contract for bricks to Bocquin & Rentzel, as previously stated, has leased the latter's works and will manufacture the brick himself. A new dry-kiln will be erected.

Helena—Box Factory.—New machinery is being put in the Helena Box Factory.

Lead Hill—Mining.—The Lead Hill Mining & Smelting Co. has been incorporated by W. C. Singletary, John Bolinger, S. W. Pierce and others with a capital stock of \$250,000.

Little Rock—Electric-light Plant.—The Edison Electric Light Co. will increase its capacity to 1,300 lights and make other improvements.

Little Rock—Motor Works.—A stock company has been organized, it is stated, to manufacture the motor and dynamo lately reported as being made at D. H. Thomas' cotton press works.

Little Rock—Flour Mill.—E. W. Parker, J. E. Biscoe, Rev. Edward Fitzgerald and others are organizing a company to build a 200-barrel flour mill.

Malvern—Electric-light Plant.—A company is being organized to erect an electric-light plant. D. D. Maddy can give particulars.*

Ouachita County—Timber Land.—Muskegon (Mich.) parties have purchased 1,000 acres of timber land from E. B. Hillman, of Hope.

Paragould—Soap Factory and Tannery.—The establishment of a soap factory and tannery is projected.

Pine Bluff—Fire Extinguishers.—The Emma Oil Co. is putting automatic fire extinguishers in its cotton-seed oil mill.

Rogers—Electric-light Plant.—A. Bucklin is interested in the erection of the electric light plant lately mentioned.

Silver City—Mining.—F. W. Gibb, C. E., has been investigating mineral land for parties who will, it is stated, develop if his report is favorable.

Stuttgart—Publishing.—W. T. Smith will publish a newspaper.

Van Buren—Electric-light Plant.—Contract has been let for the erection of the Thomson-Houston electric-light plant lately mentioned. The mayor can give particulars.

Wynne—Water Works.—The construction of a system of water works is agitated.

FLORIDA.

Apalachicola—Saw Mill.—The Kimball Lumber Co., lately mentioned as securing a site for a canning factory and planing mill, will put a new engine in its saw mill.

Arcadia—Phosphate Works.—The Peace River Phosphate Co., lately mentioned as to build drying and roasting works, will erect a plant, capacity for 100 tons daily. Machinery has been purchased.

Bonifay—Saw Mill.—A portable saw mill is to be located near Bonifay.

Charlotte Harbor—Ice Factory.—An ice factory will, it is reported, be started.

Leesburg—Cigar Factory.—J. F. Omweg will probably enlarge his cigar factory.

Fernandina—Fibre Factory.—The Loomis Manufacturing Co. will expend \$35,000 for new machinery for its fibre factory, mentioned in last issue, but none at present.

Ocala—Box Factory.—A cigar box factory will probably be started.

Ocala—Laboratory.—Dr. R. R. Snowden is erecting a building to be used as a chemical laboratory.

Ocala—Phosphate Lands.—Parties have purchased the phosphate land of William Tompkins for \$11,000, and of J. Sanders, in Citrus county, for \$17,000.

Oviedo—Irrigation.—J. O. Jelks will erect a plant for irrigating his orange grove.*

Palatka—Lumber Mill.—Butler & Riles are putting the shingle machinery in their lumber mill, as stated in last issue. They have recently added a new 70 horse-power boiler and other machinery.

Pemberton—Shingle Mill.—H. T. Smith-Dorrien has moved his shingle mill from McLeansburg to Ehren, on the Pemberton ferry branch of the Florida Southern Railroad.

Pensacola—The Gulf Real Estate Co. has been organized by R. M. Cary, Jr., and others. The capital stock is to be \$35,000.

Pensacola—Steel Plant.—The Jones Nutlock & Switchlock Co., of Syracuse, N. Y., is investigating the advantages of Pensacola with a view to establishing a steel plant.

Selman—Rice Mill, etc. Barbour & Hammond have purchased a tract of rice land and will cut a canal for irrigating purposes and erect a rice mill.

St. Andrew's Bay—Salt Works.—A stock company will probably be organized to manufacture salt.

Tallahassee—Iron Mines.—Experts are examining iron ore recently discovered near Tallahassee, and if they report satisfactory, it is stated it will be developed.

Tampa—Laundry.—The Tampa Lumber Co. is the name of the company lately reported as to establish a steam laundry. It has not definitely decided on the laundry.

Tampa—Publishing.—A \$5,000 stock company has been organized by C. E. Harrison, J. P. Wall and others to publish the Tribune.

GEORGIA.

Atlanta—Glass Works.—The Atlanta Glass Co., lately mentioned as contemplating enlarging its works, will build two additional furnaces.

Atlanta—Glass Works.—The Gate City Glass Co., lately reported as organized to manufacture glass, will soon break ground for its works. It will manufacture druggists' ware, etc., at present, and later add window glass. The capital stock is \$50,000.*

Bainbridge—Barrel Factory.—E. Lamb will erect the barrel factory reported in last issue.

Brunswick—Saw Mill.—A. Hughes, of Brunswick, is erecting a large saw mill at the 29-mile post on the East Tennessee, Virginia & Georgia Railroad.

Brunswick—Sewerage System.—The city has decided by a popular vote not to issue the bonds for a sewerage system and other improvements lately mentioned.

Brunswick—Artesian Wells.—J. S. Wright and S. C. Atkinson have purchased land near Brunswick and established a dairy farm. Artesian wells are to be sunk.

Brunswick—Dry-dock.—E. C. Brewer, of Providence, R. I.; B. M. Smith, of Steuben, Me., and George Taylor propose to build the dry-dock previously reported.

Brunswick—Bridge.—J. L. Beach, clerk county commissioners, will receive proposals until January 6, 1890, for constructing a wooden bridge 65 feet long across the Altamaha canal.

Carrollton—Trunk Factory.—Bexley Bros. will shortly start a trunk factory.

Cartersville—Steel Plant.—It is rumored that the South Chicago Steel Co. has leased manganese lands and will develop, and begin the erection of a steel plant early next spring.

Cartersville—Ferro-Manganese Furnace.—The Georgia Manganese & Iron Co., previously reported as to develop manganese mines, contemplates, it is reported, erecting the ferro-manganese furnace mentioned in last issue.

Cordele—Water Works.—The city council has appointed R. C. Harris, G. M. McMillan and J. B. Scott to take charge of the construction of the system of water works lately mentioned.

Cordele—Cotton Factory.—It is reported that the Cordele Manufacturing Co. will enlarge its cotton factory.

Dahlonega—Gold Lands.—W. T. Bryson has purchased for other parties the Turkey Hill gold property.

Darien—Saw Mill.—J. K. Clarke & Co. have rebuilt their saw mill, putting in new boiler and engines.

Gainesville—Foundry and Machine Shop.—W. A. Palmer, of Anniston, Ala., has purchased the Butler & Hunt foundry and machine shop mentioned in last issue.

Johnsonville—Saw Mill.—Berrick & Co., of Detroit, Mich., will erect a large saw mill and has let contract for machinery.

Macon—Car Shops.—The Central Railroad & Banking Co. (office, Savannah) contemplates enlarging its shops to increase facilities for the manufacture of cars.

Macon—Chopper Factory.—The Ammons Cotton Chopper Co., previously reported, has completed its organization with Virgil Powers, president; J. C. Weaver, vice-president, and J. B. Ammons, general manager. The capital stock is \$30,000.

Macon—Bottling Works.—The Macon Brewing Co. has put its new beer brewery in operation, and will, it is stated, add bottling works early next spring.

Macon—Car Works.—It is proposed to organize a \$250,000 stock company to build car works.

Macon—Spoke and Hub Factory.—J. H. Roush & Sons contemplate, it is reported, enlarging their spoke, hub, felloe and rim factory.

Milledgeville—Electric-light Plant, &c.—The Electric Light Co. has been incorporated by W. T. Conn, T. O. Powell, W. S. Brooks and others to erect and operate an electric-light plant and build gas and water works. This company will probably operate the electric-light plant previously reported as to be erected by the Milledgeville Oil & Fertilizer Co. The capital stock is \$17,000.

Milledgeville—Canning Factory.—The Milledgeville Oil & Fertilizer Co. contemplates starting a canning factory in connection with its oil mill.*

Resaca—Corn Mill.—W. L. Fain, mentioned in last issue, is negotiating for scouter for his corn mill, and will probably enlarge the bolting capacity.

Savannah—Soap Factory.—Moore, Hull & Co. contemplate starting a soap factory, and want information about the business.*

Savannah—Compresses.—The Savannah Cotton Press Association is figuring on rebuilding one or more of its four cotton compresses previously reported as burned.

Savannah—Gas Works.—The Brush Electric Light & Power Co. contemplates erecting works for the manufacture of fuel and illuminating gas, as mentioned in last issue.*

Savannah—Artesian Well.—A 6-inch artesian well is to be sunk at the De Soto Hotel. David Wells has the matter in charge.

Savannah—Naval Stores Factory.—The S. P. Shotton Co., lately reported as incorporated, will succeed S. P. Shotton & Co., manufacturers of naval stores.

Sparta—Granite Quarries.—Operations at the Georgia Quincy granite quarries will be enlarged and new machinery added. Archibald Wilson is superintendent.*

Sunny Side—Sugar Mill.—E. H. Dorsey has started a small sugar mill and expects to enlarge same next season.*

Tallahassee—Ice Factory.—Charles Johnson is negotiating to secure the erection of an ice factory.*

Tallahassee—Knitting Mill.—Alvin Porter, of Elkhart, Ind., has offered to establish the knitting mill mentioned in last issue if granted certain inducements. He proposes to erect buildings as follows: Main building, two stories, 120x35 feet, engine house 30x35 feet, and warehouse 50x35 feet, and to employ 125 hands.

Tallahassee—Distillery.—Isidor Levi will operate the distillery lately mentioned.

Waycross—Water Works, etc.—The city has decided by a popular vote to issue the \$30,000 of bonds to build water works, sewerage system and garbage crematory as previously reported.

Waynesboro—Planing Mill.—Wallace & Davis have started a planing mill.

KENTUCKY.

Adairville—Flour Mill and Elevator.—J. C. Carroll & Co., previously reported as to rebuild their burned flour mill, have organized the Adairville Milling Co. It is to be a 75-barrel mill and will be erected next year. A grain elevator will also be built.*

Addison—Saw Mill.—The stock company lately mentioned as organized by L. D. Addison and others to build a roller flour mill will also erect a saw mill.*

Ashland—Electric-light Plant.—The Ashland Electric Light & Power Co., lately reported as putting in an incandescent dynamo, has increased its capital stock from \$10,000 to \$25,000.

Beattyville—Saw Mill.—The Kentucky River Lumber Co. is erecting a new saw mill.

Bowling Green—The Bowling Green Gas Works will, it is reported, be soon enlarged.

Clay City—Brick and Terra-cotta Works.—The Clay City Brick Co., lately reported as incorporated, has a brick-yard in operation, with a daily capacity of 50 M brick and will, in the spring, put in a clay separator, dry-kilns and terra-cotta machinery.*

Covington—Flour Mill.—B. K. Turner will probably rebuild his flour mill burned about a year ago.*

Covington—Machine Shops.—The shops lately mentioned as being built by the Kentucky Central Railway Co. (office, Cincinnati, Ohio) will include

two brick buildings, each 90x87 feet, a round-house to hold 13 engines, and a boiler and engine-house. When completed the shops will employ about 200 men.

Franklin—Canning Factory.—The German Colonization Co., Henry Lemcke, manager, is considering the erection of the canning factory reported in last issue (under Russell county).*

Hawesville—Oil Well.—The Owensboro-Hawesville Co. is sinking the oil well lately mentioned.

Henderson—Marble Works.—J. H. Flemming is erecting a new building for his marble works.

Louisville—Rolling Mill.—Barry Coleman expects to organize a stock company next month to build the rolling mill lately mentioned. It is proposed to manufacture light sheet and "fire bed" iron and steel.*

Louisville—Publishing.—The Board of Trade will publish the Board of Trade Journal.

Louisville—Pipe and Terra-cotta Works.—P. Bannon, previously reported as to enlarge his sewer pipe and terra-cotta works, has, with others, organized the Louisville Fire-brick & Tile Co. It will erect brick works at once. The capital stock is \$40,000.

Louisville—Fire Engines, &c.—A resolution has been introduced in the city council to appropriate \$25,000 for new fire engines and equipments. The mayor can give information.

Louisville—Distilleries.—E. Hofheimer is reported as securing options on Kentucky whiskey distilleries for an English syndicate.

Louisville—Iron and Steel Works.—The International Steel Co. has been incorporated with St. John Boyle, president; M. F. Coomes, vice-president, and J. W. Nicholls, secretary and treasurer, to manufacture from iron and steel. The capital stock authorized is \$1,000,000.

Maysville—Buggy Factory.—A Columbus (Ohio) company will, it is rumored, establish a buggy and carriage factory.

Maysville—Barrel Factory.—It is stated that a Vanceburg barrel factory will probably be moved to Maysville.

Middlesborough—Iron Furnace.—O. W. Davis, Jr., previously reported as to build a 50-ton charcoal iron furnace, has, with C. W. Livermore and G. L. Reis, incorporated the Cumberland Gap Iron Co. with the privilege to mine coal and ores of all kinds, and manufacture coke, iron, steel, lumber, etc. The capital stock authorized is \$500,000. Work on the furnace is to begin in January.

Mt. Sterling—Electric-light Plant.—It is reported that a Thomson-Houston electric-light plant is to be erected. The mayor can give information.

St. Helens—Spoke and Wheel Factory.—The Lexington Spoke & Wheel Co., of Lexington, contemplates moving its spoke and wheel factory to St. Helens.

LOUISIANA.

Arcadia—Publishing.—F. G. Hulse has commenced the publication of the Herald.

Baton Rouge—Levee Work.—F. M. Kerr, assistant State engineer, has staked off for construction the following levee work: At Staten Point, 16,500 feet in length, and estimated to contain 65,000 cubic yards of earth; at Dufresne's, 7,600 feet, estimated at 22,000 cubic yards; at Eagle Bend, 841 feet, estimated at 6,700 cubic yards; at Dixie's plantation, 2,240 feet, containing 6,500 cubic yards, and in Bossier parish, 8,890 feet, containing 20,000 cubic yards.

Baldwin—Sugar Refinery and Machine Shop.—Baldwin & Co. are erecting a machine shop at their sugar refinery, and intend putting a double effect in the refinery.

Cypremort—Sugar Factory.—A. Pecot & Bros. will probably organize a stock company to erect a \$250,000 sugar factory.

Farmerville—Machine Shop.—W. P. Chandler is putting a new 12 horse-power boiler in his machine shop, and will add other machinery.

Jennings—Rice Mill.—The erection of a rice mill is talked of.

Lakeland—Sugar-house.—J. A. Kougon expects to enlarge and improve the sugar-house on his Austerlitz plantation and put in steam train and double set of rollers.

Marion—Boiler and Engine.—R. M. & J. A. Love are putting in a new 25 horse-power boiler and engine.

New Orleans—Ice Factory.—The ice factory reported in last issue as to be erected by the Consumers' Ice Co. will have a daily capacity of 100 tons.

Ouachita City—Saw Mill.—F. F. Wager & Bro. are erecting a new saw mill.

MARYLAND.

Baltimore—Electrical Works.—It is rumored that Alfred Moore, Francis Budd, Alexander M. Fox and others contemplate establishing large works for manufacturing electrical supplies. D. Howard Tuxworth can give information.

Baltimore—Watch Factory.—The Keystone Watch Co. has been incorporated by F. H. Davidson, J. M. Cone, W. F. Lockwood and others for the manufacture of watches, with a capital stock of \$60,000.

Baltimore—Sugar Refinery.—The Baltimore Sugar Refinery Co. has let contract for erecting the buildings for its sugar refinery, previously reported as to be established at Curtis bay, to S. H. & J. F. Adams and William Ferguson & Bro. The buildings will include a filter-house, 13 stories, 110x50 feet; a sugar-house, eight stories, 50x50 feet; a wash-house, four stories, 50x50 feet, and boiler, engine, pump and storage houses. An artesian well will be sunk, and a dock extending out in the water 750 feet and 100 feet wide constructed. Kraft & Engle prepared the plans, as previously stated.

Baltimore—Motor Works.—The Baxter Electric Motor & Manufacturing Co. has been reorganized with a capital stock of \$200,000, and will probably soon put works in operation again.

Frostburg—Water Works.—The town is investigating with a view to building or purchasing water works. Owen Hitchens can give information.

Havre de Grace—Flint Mill.—The Trenton Co. is improving its flint mill, and will add new machinery.

Pocomoke City—Electric-light Plant.—The Pocomoke Electric Light Co. will, it is reported, put in a new boiler, engine and dynamo in the spring.

Washington, D. C.—Brewery.—The Robert Porter Brewing Co., of Alexandria, Va., has purchased land, it is stated, with the intention of moving its brewery to Washington.

Washington, D. C.—Iron Works.—Edward L. Dent will build a workshop 33x13 feet at his iron works.

Washington, D. C.—Cement and Lime Works.—The Jackson-Jones Co. has been incorporated by Hon. Elihu E. Jackson, of Salisbury, Md.; J. N. Jackson, H. A. Jones and W. E. Emory for the manufacture of cement and lime. The capital stock is \$5,000.

Washington, D. C.—Ice Factory.—The Capital Ice Co. has been incorporated by J. L. Barbour, Richard Rice, Reed & Reardon, of Alexandria, Va., and Hon. Henry Lord, of Maine.

MISSISSIPPI.

Corinth—Planing Mill.—M. S. Ketcham is putting new machinery in his planing mill.

Greenville—Grain Elevator.—The Greenville Elevator & Warehouse Co. has purchased a site for its grain elevator previously reported.

Meridian—Electric-light Plant.—Thomson-Houston Electric Light & Power Co., previously reported as to enlarge its plant, has increased its capital stock to \$50,000.

Orvisburg—Saw Mill.—The Champion Lumber Co. has started a new saw mill.

Terry—Land.—Hon. Parker Earle, of Ocean Springs, has purchased from J. J. Conway 600 acres of land near Terry.

NORTH CAROLINA.

Asheboro—Dry-kiln.—A. W. McAlister will probably replace his dry-kiln reported in this issue as burned with a patent kiln.*

Asheville—Water Supply.—The West Asheville Improvement Co., which is building the new town of West Asheville, will, it is stated, lay five miles of 8-inch pipe from Spring Mountain to supply the town with water.

Blowing Rock—Water Works.—John Bernhardt, of Lenoir, is interested in the construction of the system of water works previously reported.

Bridgewater—Coal Mine.—Daniel Brown is investigating a coal mine on his property and will develop if prospects are good.

Charlotte—Ice Factory.—C. C. Habenicht, of Columbia, S. C., contemplates locating an ice factory in Charlotte.

Cumberland County—Saw Mill.—It is reported that a company of Franconia, N. H., represented by Alden Bowles will erect a large saw mill.

Durham—Tobacco Factory.—The Faucit Tobacco Co. and Corbett, Christian & Co., manufacturers of tobacco, will consolidate.

Durham—Cigarette Factory.—The Durham Medicated Cigarette Co. will be chartered about January 1, 1890, by R. F. Whitehurst and others to manufacture cigarettes.*

Edenton—Electric-light Plant.—The Branning Manufacturing Co. will enlarge the electric-light plant in its lumber mill. The company has bought out the Castil & Roanoke Railroad & Lumber Co. and will enlarge its business.

Ellenboro—Saw Mill.—Allen & Co. have purchased a saw mill and will erect it near Ellenboro.

Forest City—Publishing.—J. Green has commenced the publication of the Ledger.

Greensboro—Limestone Quarries.—The North Carolina Steel & Iron Co., lately reported as organizing to build a Bessemer iron furnace, etc., has, it is reported, purchased the right to work the lime-rock on the lands of I. T. Crumpler, J. Guthrie and S. Morris, of Germantown.

High Point—Electric-light Plant and Water Works.—New York capitalists contemplate, it is reported, erecting an electric-light plant and building water works.

High Point—Tobacco Factory, etc.—W. H. Snow has enlarged his tobacco factory and contemplates putting in a 500 horse-power engine and boilers to

run his planing mills, spoke factory and tobacco factory by transmission of power.

Kinston—Bobbin and Shuttle Factory.—J. M. Wooten and J. P. Kelly will start a bobbin and shuttle factory at Kelley's Mill, four miles from Kinston.

Lincolnton—Furniture Factory.—The Meears. Mota have erected a two-story building, 100x40 feet, and expect to put in machinery for the manufacture of furniture.

Morganton—Flour Mill.—The Farmers' Alliance intend building a roller flour mill.

Murfreesboro—Pulp Mill.—J. B. Brewer contemplates adding a pulp mill to his paper mill at Falls of Neuse.*

New Bern—Saw Mill.—W. B. Blades and others are erecting a saw mill.

Oxford—Cigarette Factory.—The Granville County Farmers' Alliance Tobacco Manufacturing Co. will probably establish the cigarette factory mentioned in last issue.

Petersburg—Trunk Factory.—Simon Seward & Co. will put a new 40 horse-power engine in their trunk factory.*

Raleigh—Phosphate Works.—The Raleigh Phosphate Co., previously reported as to enlarge its phosphate works, has put in some new machinery, and later will add the manufacture of acid.

Red Springs—Lumber Mill.—Parks Fitzhugh has added planing machinery to his lumber mill near Red Springs.

Red Springs—Saw Mill.—A. B. Pearsall and B. W. Townsend have purchased a tract of pine timber land near Red Springs and intend erecting a saw mill.

Rockingham—Cotton Mill.—The Ledbetter Manufacturing Co. will put the 1,000 additional spindles in its cotton mill mentioned in last issue and is now purchasing machinery.

Rutherford County—Land.—Maine parties are reported as purchasing 9,000 acres of land from Rev. C. B. Justice, of Rutherfordton.

Salisbury—Cotton Mill.—The Salisbury Cotton Mills is putting in new machinery to make its own filling.

Salisbury—Manufacturing.—A Northern company contemplates manufacturing railroad supplies in Salisbury.

Southern Pines—Timber Land.—C. H. Daniels contemplates purchasing a tract of timber land near Southern Pines. If he purchases he will erect a saw mill.*

Sylva—Kaolin Works.—The Equitable Manufacturing Co., reported in last issue as opening a new kaolin mine, will put additional machinery in its works.*

Weldon—Grist Mill.—The Roanoke Navigation & Water Power Co., previously reported as to develop the water-power on its property, will erect a grist mill to have a daily capacity of 2,000 bushels.

SOUTH CAROLINA.

Beaufort.—The Beaufort Board of Trade has been organized with D. C. Wilson, president; S. H. Rodgers, vice-president, and C. C. Townsend, secretary.

Charleston—Lumber Mill.—The Steinmeyer Lumber Co. has put new boilers and engines in its lumber mill.

Florence—Artesian Well.—It is proposed to sink an artesian well and construct a reservoir. The mayor can give particulars.

Georgetown—Barrel Factory.—It is reported that a \$15,000 stock company will be organized for the manufacture of barrels.

Georgetown—Lumber Mill.—Aldeman & Merritt have leased the Poinsett Lumber Mill and will put in new machinery.

Greenville—Factories.—B. F. Perry states that he has received propositions from parties offering to establish a canning, soap and other factories if the railway to the Paris Mountain Hotel, mentioned elsewhere in this issue, is built.

Yorkville—Pottery.—W. G. Shillinglaw will start the pottery mentioned in last issue on a small scale.

TENNESSEE.

Bristol—Oil Tanks.—The Baltimore Oil Co., of Baltimore, Md., will erect storage oil tanks.

Brownsville—Gas Works.—W. B. McKinney, of Troy, Ohio, proprietor of the Brownsville Gas Works, reported in this issue as burned, will take steps to rebuild at once.

Chattanooga—Furniture Factory.—Haynes, Spencer & Co., of Richmond, Ind., state that there is no truth in the report that they would move their furniture factory to East Chattanooga, referred to in last issue.

Chattanooga—Tool Works.—The Niles Tool Works, of Hamilton, Ohio, contemplate, it is said, changing the location of its works, and efforts are being made to secure the removal of same to Chattanooga.

Chattanooga—Lumber Mills.—The Seymour Stratton Lumber Co. and Martindale & Beach have consolidated as the Southern Lumber Co. An electric dynamo will be put in to light its lumber mills.

Chattanooga—Car Wheel and Locomotive Works.—It is reported that the Queen & Crescent System (office, Cincinnati, Ohio) will demolish the old Alabama Great Southern machine shops and erect on the site extensive car wheel and locomotive works.

Chattanooga—Railroad Tie Factory.—A company has been organized with L. Schofield as president and Edward Schofield as secretary to manufacture the Schofield patent metal railroad tie.

Cleveland—Pottery.—The Cleveland Fire Brick Co., previously reported as to build new dry-kilns, has been incorporated and will, it is stated, add the manufacture of pottery.

Coal Creek—Saw Mill.—R. Lu Allen has started a new saw mill.

Covington—Lumber Mill.—Randall Bros. & Co. will put new boilers in their lumber mill reported in last issue as damaged by a boiler explosion; also a band saw mill.*

Cumberland Gap—New Town.—A syndicate has, it is reported, purchased the Cottrell farm of 300 acres at Bulcher Springs, 4 miles from Cumberland Gap, and will lay off a new town.

Johnson City—Flour Mill.—J. J. Hunt, of Jonesboro, will build the 125-barrel flour mill lately mentioned.

Jonesboro—Iron Furnaces and Mines.—The Embreeville Freehold, Land, Iron & Railway Co., organized in England, is the name of the company previously reported as purchasing the Embreeville iron property. Hon. H. R. Bland, Richard Dalgleish and Thomas Watson, of the company, are now investigating the property, and it is stated that if the iron ore is found in sufficient quantity blast furnaces will be built and development on a large scale commenced.

Knoxville—Shoe Factory.—Ohio parties are prospecting with a view to establishing a shoe factory.

Knoxville—Cabinet Factory.—It is reported that Northern parties will establish a cabinet factory.

Madisonville.—The Farmers' Alliance contemplates building a 200-barrel flour mill at some point in Monroe county.

Maryville—Marble Works.—Webb & McClure will start marble works.

Memphis—Brewery.—The Tennessee Brewing Co. will build a new brewery at an estimated cost of from \$100,000 to \$150,000. Fred. Wittman is preparing plans.

Memphis—Stove Factory.—W. H. Wooldridge, of Birmingham, Ala., has submitted a proposition to the Commercial Association to establish a \$100,000 stove factory.

Mossy Creek—Machine Works.—Works are being built for the manufacture of mills and mill gearing. The Mossy Creek Manufacturing Co. can give particulars.

Mossy Creek—Washboard Factory.—The Mossy Creek Manufacturing Co. expects to greatly enlarge its washboard factory in the near future.

Nashville—Sewerage System.—The city engineer has prepared plans for the building of a circular sewer nine feet in diameter a distance of 3,700 feet, at an estimated cost of \$60,000. The mayor can give particulars.

Nashville—Wagon Factory.—A company has been organized with J. F. Foard, president, to purchase the wagon factory of Cherry, Morrow & Co. and manufacture under the patents of the Kentucky Wagon Manufacturing Co., of Louisville, Ky.

Rives—Saw Mill and Wood-working Factory.—E. B. Chester has erected the saw mill and wood-working factory lately mentioned and expects to put in additional machinery in the spring.

Rogersville—Flour Mill.—E. M. Spears will commence the erection of the flour mill reported in last issue in February next. It is to be a 50-barrel roller mill operated by water-power.*

Sherman Heights—Dish Factory.—The Chattanooga Wooden Tray Co. is the name of the company lately reported as organized with G. T. Benjamin, president, and J. E. Doubleday, secretary and manager, for the manufacture of wooden butter dishes. The capital stock is \$50,000.*

South Pittsburgh—Mining.—The Sequatchie & South Pittsburgh Coal & Iron Co. has been incorporated by F. V. Brown, W. D. Spears, J. L. Gaines and A. Spears. It owns, it is stated, 50,000 acres of mineral land and will develop.

South Pittsburgh—Iron Furnace.—The Tennessee Coal, Iron & Railroad Co. is relining its No. 2 iron furnace.

Springfield—Flour Mill.—The flour mill lately mentioned is to be built next spring. J. M. Cots is interested.*

Winchester—Steel Plant, Iron Mines, etc.—J. L. Gorton has sold the coal and iron lands on which he held an option, as previously reported, to W. E. Dabney, of Birmingham, Eng., representing a syndicate. The land contains 110,000 acres, and the charter of the Tennessee & Alabama Land, Mining & Railroad Co. was also included in the sale. The syndicate proposes to develop the property, manufacture steel and build a railroad, as stated elsewhere in this issue. A new town

will probably be built on the Tennessee river, near Stevenson, Ala.

Winchester—Marble Quarry.—An English company has purchased a marble quarry from J. L. Gorton, and will develop.*

TEXAS.

Beaumont—Lumber Mill.—The Beaumont Lumber Co. has put a new matcher and planer in its lumber mill.

Belton—Electric-light Plant.—The Belton Light & Water Co. contemplates putting in an electric-light plant.

Bowie—Grist Mill and Gin.—Brodie & Borler will erect a grist mill and cotton gin.*

Brenham—Oil Mill.—D. C. Giddings states that nearly all the stock has been subscribed to the \$50,000 stock company lately mentioned as being organized to build a second cotton-seed oil mill.*

Clifton—Flour Mill.—A stock company, of which J. Chandron is president, is building the 50-barrel flour mill reported in last issue.

Coleman—Creamery.—F. M. Bowen, W. B. Crawford and others have organized the Citizens' Association and will probably take steps to establish a creamery.

Dallas—Brick Works.—The Dallas Pressed Brick Co. has been incorporated by Thomas Field, S. H. Hoffman and J. O. Conner for the manufacture of brick. The capital stock is \$40,000.

Dallas—Sewerage System, etc.—Doyle & Farrell have received contract to construct a sewer on Ervay street and P. O'Donnell and J. K. Hearte contracts to grade certain streets.

Denison—Chair Factory.—J. F. Jaworek is proprietor of the chair factory reported in last issue as to be moved to Denison from Georgetown and operated by a stock company.

Denison—Creamery.—The city has received a proposition for the building of a garbage creamery. The mayor can give particulars.

Denison—Ice Factory.—The Denison Crystal Ice Co. is reported as to enlarge its plant.

Eagle Cove—Flour Mill and Gin.—E. K. Harris, lately mentioned, intends erecting a small French burr flour mill and another 60-saw gin stand, feeder and condensers.

Fort Worth—Medicine Factory.—Dr. E. G. Salmon, of Nashville, Tenn., is prospecting with a view to locating a branch medicine factory in Fort Worth.

Fort Worth—Flour Mills and Grain Elevators. A. B. De Friese, of London, Eng.; G. S. Hurley, W. S. Hurley and S. J. Memory have incorporated the North Texas Grain, Milling & Elevator Co. with a capital stock of \$500,000. The company expects to purchase several flour mills and erect grain elevators.

Fort Worth—Machine Shops.—The Denver, Texas & Fort Worth Railroad Co. (office, Denver, Col.) will, it is reported, rebuild its machine shops.

Fort Worth—Rolling Mill.—Beach & Durack, of St. Paul, Minn., will move the rolling mill previously reported to Fort Worth. A site has been secured and a building 110x160 feet will be erected.

Fort Worth—Piano Factory.—A piano factory is projected.

Fort Worth—Woolen Mill.—The capital stock of the Fort Worth Woolen Mills Co., reported in last issue, will be \$60,000 or \$75,000. C. W. Post can give particulars.

Greenville—Grist Mill and Gin.—J. F. Moudy will put a new 25 horse-power boiler in his grist mill and cotton gin, lately mentioned as damaged by a boiler explosion.*

Henrietta—Land.—It is rumored that a company is being organized to purchase 17,000 acres of land to lay off in small farms.

Henrietta—Canning Factory and Evaporator. The Henrietta Canning & Evaporating Co. is the name of the company lately reported as organized to erect a canning factory and evaporator. P. M. Stine is president; A. K. Swan, vice-president, and W. B. Stickney, secretary. The capital stock is to be \$35,000.

Houston—Sewerage System.—The city will receive proposals about the latter part of next January for the construction of 17 miles of sewers and 1½ miles of brick conduit surface drainage; also for a 250-foot span drawbridge. C. W. Lewis, city engineer, will furnish plans and specifications on application.

Hubbard City—Artesian Well.—The sinking of an artesian well is talked of.

Jacksborough—Grist Mill and Gin.—The Brown Valley Farmers' Alliance Co-operative Gin & Mill Association of Jack County has been incorporated by J. S. Teague, G. W. Miller, J. N. Leach and others. The capital stock is \$10,000.

Kyle—Grist Mill and Gin.—D. M. Crosthwaite is reported as to enlarge his grist mill and cotton gin.

Kyle—Grist Mill and Gin.—Beaty & Martin will, it is stated, erect a grist mill and cotton gin to cost \$8,000.

Laredo—Foundry and Machine Shop.—The foundry and machine shop lately mentioned as

being erected by the Laredo Foundry & Machine Co. is to be of brick, two stories, 50x150 feet.

Laredo—Cotton, Silk and Woolen Factories.—The Laredo Board of Trade has received a proposition from a manufacturer of cotton, silk and woolen goods of Huddersfield, Eng., offering to establish similar factories in Laredo to employ about 500 hands.

Linden.—The Woodworth Lumber Co. of Cass county has been incorporated by W. H. Woodworth, A. B. Hinkle, P. A. Carwin and others. The capital stock is \$150,000.

McKinney—Crematory.—The city council is considering the construction of a garbage crematory.

New Birmingham—Dry-kiln.—G. R. McDonald, lately mentioned as putting new machinery in his planing mill, will erect a dry-kiln.

New Birmingham—Cotton Mill.—E. C. Dickinson states that the cotton mill mentioned in last issue is assured.

Plank—Lumber Mill.—Middlebrook & Bro. contemplates putting a new engine in their lumber mill.

Quanah—Lime Works.—The Quanah Lime Co. has been recently organized to manufacture lime and plaster of paris.

Sabine Pass.—The Sabine Pass Channel Co. has been incorporated by John N. Gilbert, W. A. Fletcher, B. D. Cray, of Orange, and others, for the purpose of dredging the bar at Sabine Pass. The capital stock is \$100,000.

Sartoria—Sugar-house.—L. A. & C. G. Ellis will probably enlarge the bagasse furnace at their sugar-house and make other improvements.

Sulphur Springs—Flour and Planing Mills.—The Phoenix Roller Mills contemplates rebuilding its flour and planing mills reported in last issue as burned. It is intended to rebuild the planing mill first.

Vernon—Electric-light Plant.—The city will soon let contract for erecting an electric-light plant. The mayor can give particulars.

Vernon—Planing Mill.—The Board of Trade has donated a site to Eastern capitalists on which to build a planing mill.

Waco—Ice Factory.—The erection of an ice factory by New York parties is rumored.

VIRGINIA.

Alexandria.—Northwestern Investment Co. has been incorporated with a capital stock of \$300,000 to deal in real estate.

Alexandria—Bottling Works.—The Darley Park Brewing Co., of Baltimore, Md., is reported as to establish bottling works.

Bedford County—Mineral and Timber Land. A Baltimore party has, it is reported, purchased 4,000 acres of mineral and timber land.

Berkley—Knitting Mill.—The Chesapeake Knitting Mills has let contract for the building of its knitting mill previously reported. Work has commenced.

Buena Vista—Land.—The Buena Vista Improvement Co. has been organized with M. E. Miller, president; G. C. Jordan, vice-president, and W. T. McCue, treasurer. The capital stock is to be not less than \$75,000 or more than \$500,000. It has purchased land and will, it is stated, make extensive improvements.

Charlottesville—Shoe Factories.—It is reported two of the shoe factories recently burned at Lynn, Mass., will be rebuilt at Charlottesville.

Danville—Tobacco Factories.—Dr. J. A. Jones has purchased the Loyal street and the High street tobacco factories from the estate of T. J. Lee for \$7,375.

Fincastle—Wagon Factory.—Rauch, Crush & Co. will erect a wagon and buggy factory.

Hampton—Bridge.—The Elizabeth City county will issue bonds to build an iron bridge about 650 feet long by 35 feet wide. S. C. B. Lake can give particulars.

Ivanhoe Furnace—Mineral Land.—The New River Mineral Co. has purchased the mineral right on the land of Mrs. Gregory for \$12,000.

Lexington—Ice Factory, &c.—W. T. Wormeldorf has consummated the purchase of Lexington Ice Factory mentioned in last issue. He will erect a bone and plaster mill and a grain elevator to be operated in connection with the ice factory.

Norfolk—Chemical and Fertilizer Works.—The Nitro-Phosphate Co., Limited, of London, England, is the company previously reported as to establish chemical and fertilizer works. It has issued \$50,000 of bonds.

Norfolk—Compresses.—The syndicate lately mentioned as purchasing the Norfolk cotton compresses has incorporated the Consolidated Compress Co. V. D. Grover is president; Fergus Reid, general manager, and C. C. Pearson, treasurer of the company.

Norfolk—Canal.—The Norfolk & North Carolina Canal Co., lately mentioned as purchasing and to improve the Dismal Swamp canal, has increased its capital stock to \$1,000,000 and will issue bonds, and, it is stated, expend \$500,000 in improving the canal.

Princeton—Saw Mill.—G. W. Truitt & Co. will probably increase capacity of their saw mill.

Pocahontas—Coke Ovens.—The Virginia Development Co. contemplates building 300 additional coke ovens.

Parkersburg—Stone Quarry.—The Atlantic Stone Co., of Boston, Mass., has purchased the Jackson interests in Prospect Hill and will quarry the stone and saw it for building purposes.

Richmond.—Bills have been introduced in the legislature to incorporate the Glenwood Furnace Co. and the Chesapeake Lumber Terminal Co.

Richmond.—A bill has passed the State Senate incorporating the Virginia Mining, Milling & Transportation Co.

Richmond.—A bill has been introduced in the legislature incorporating the Columbia Railway & Navigation Co. with H. C. Parson, S. H. Letcher, V. D. Groner, of Norfolk; Jed Hotchkiss and others as incorporators. The company is privileged to build railroads, docks, elevators, shipyards, canals, construct and operate steamship lines, furnaces, mills, etc., and develop mines. The capital stock is to be not less than \$1,000,000 nor more than \$100,000,000.

Roanoke—Electric-light Plant.—The Roanoke Electric-light & Power Co. will, it is reported, put in two 100 horse-power engines.

Roanoke—Land.—A land company has been organized with A. S. Asbury, president; W. F. Baker, vice-president, and W. A. Caldwell, secretary. It has purchased the Sexton property of 140 acres for \$55,000.

Start's Draft—Saw Mill.—J. H. Rankin has repaired the damage to his saw mill, occasioned by the explosion of the boiler, as reported in this issue.

Suffolk—Brick Works.—D. C. Harrell & Co., lately reported as to change the location of their brick works, will also put in additional machinery.

Waynesboro—Chair Factory.—Lambert Bros. are building a furniture factory, two stories, 45x100 feet.

Waynesboro—Land.—Judge Quarles and associates, of Staunton, have purchased the Kayser farm for \$30,000.

WEST VIRGINIA.

Buckhannon—Saw Mills.—The Elk & Sugar Creek Boom Co., reported in last issue as incorporated, will construct a boom and erect saw mills at the mouth of Sugar creek as soon as the railroad now being built is completed to that point. Machinery will not be required before next summer.

Charlestown—Furniture Factory.—Chicago parties offer to invest \$60,000 in a furniture factory if the citizens subscribe \$10,000. G. W. Haines can give particulars.

Charleston—Electric-light Plant.—The Kanawha Electric Light Co. will, it is reported, put in a 150 horse-power boiler and engine.

Charleston—Corn Mill.—W. A. Bradford will operate a corn mill in connection with his brick works.*

Lubeck—Woolen Mill.—A new woolen mill is reported as to be built.

Moundsville.—A board of trade has been organized.

New Cumberland—Glass Works.—The Star Glass Works has been incorporated by M. H. Thayer, John Campbell, O. S. Marshall and others to manufacture glassware. A building, two stories, 70x160 feet, will be erected. The capital stock authorized is \$100,000.*

Point Pleasant—Flour Mill.—W. Eastman, E. J. Mossman, J. S. Spencer and others, operating a flour mill, have incorporated the Equity Milling Co. with a capital stock of \$21,300.

Simpson—Coal Mines.—Pennsylvania coal operators are negotiating to lease the coal lands near Simpson of J. H. Kuntz, A. Armstrong and others. If the lease is effected the coal will be developed on a large scale.

West Virginia—New Town.—Parties interested in the Norfolk & Western Railroad have organized the Philadelphia Land Co. to build a new town. It is stated that all the land between Credo and Cattleheads, Ky., has been purchased.

Wheeling—Oil Wells.—It is reported that efforts are being made to organize a company to lease and develop oil lands in Washington county.

Wheeling—Iron Furnace.—The Riverside Iron Works expect to have its iron furnace now being rebuilt ready for blast about February 1, 1890. The capacity will be from 150 to 200 tons.

The Union Shuttle Co., Lawrence, Mass., states that the report that it intended to move its works to some point in the South, referred to in last issue, is without any foundation.

BURNED.

Brownsville, Tenn.—The Brownsville Gas Works. Will probably be rebuilt at once.

Farmersville, La.—The grist mill and cotton gin of L. B. Miller near Farmersville.

Lancaster, Ky.—The distilleries of W. H. Taylor, six miles south of Lancaster; loss \$12,000.

Luling, Texas.—The Luling Cotton-seed Oil Mill reported as destroyed by fire; loss \$50,000.

Lynchburg, Va.—The tobacco factory of Love & Scott; loss \$5,500.

Marion, La.—The grist mill and cotton gin of Thomas J. Roark.

Oakland, La.—The grist mill and cotton gin of B. O. Bird.

Paragould, Ark.—The Weaver Hotel.

Paris, Texas.—The planing mill and furniture factory of Henly & Gobbett; loss reported as \$75,000.

Stuart's Draft, Va.—The saw mill of J. H. Rankin damaged by a boiler explosion.

Asheboro, N. C.—The dry-kiln of A. N. McAlister, near Asheboro.

Wilmington, N. C.—The Carolina Oil & Creosote Works damaged about \$2,000.

The cotton gins of W. L. Seawright, Moseley, S. C.; W. L. Lipsey, near Carrollton, Ala.; J. M. Williams, near Fayetteville, N. C.; George L. Stone, near Cropwell, Ala.; M. A. Beukampen, near Hardeeville, S. C.; Owen Carpenter, in Aiken county, S. C.; H. W. Armstrong, Oak Lane, Ala., and E. H. Acker, Toney Creek, S. C., have been burned.

MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Architectural Designs.—W. M. Hale, Jr., Mt. Pleasant, S. C., wants a catalogue with cuts of cottages and all modern styles of architecture.

Band Saw Mill.—Randall Bros. & Co., Covington, Tenn., want a light band saw mill to cut thin lumber from cants.

Bark Mill.—The Southwestern Machinery Co., Meridian, Miss., wants prices on mills for grinding tan bark.

Boilers and Engine.—Randall Bros. & Co., Covington, Tenn., will want a battery of two 8 to 12 six-inch flue boilers of 75 or 80 horse-power, and probably an engine.

Boiler and Engine.—Porter Brodie, Bowie, Texas, wants a 15 or 16 horse-power boiler and engine.

Boilers and Engines.—W. H. Snow, High Point, N. C., contemplates putting in a 500-horse-power engine and boilers to operate all his mills by the transmission of power.

Boiler.—J. F. Moudy, Greenville, Texas, will purchase a 25-horse-power boiler and fittings for his grist mill and cotton gin.

Boilers and Engines.—W. P. Chandler, Farmersville, La., wants to act as agent for the sale of boilers and engines.

Boiler and Engine.—T. O. Abernathy, De Ray, Tenn., wants prices on 20-horse-power boiler and engine to run a saw mill and other machinery.

Boiler, Piping, etc.—J. O. Jelks, Oviedo, Fla., wants prices on a small boiler and steam jet for raising water from a 30-foot well; also 1,500 feet iron piping 1 to 1½ inches in the clear, and rubber hose, stop cocks, etc., for irrigating purposes.

Brick and Terra-cotta Works.—The Clay City Brick Co., Clay City, Ky., will in the spring add a clay separator, dry-kilns and terra-cotta machinery.

Brick Machine.—J. S. Joyner, Franklinton, N. C., will purchase a brick machine to have a capacity of from 10 M to 20 M bricks per day.

Canning Factory.—The Milledgeville Oil & Fertilizer Co., Milledgeville, Ga., wants prices on machinery for a canning factory.

Canning Factory.—Henry Lemcke, manager of the German Colonization Co., Franklin, Ky., wants estimate on complete outfit for canning factory, including the erection of buildings.

Cars and Motors.—B. L. Dulaney, Bristol, Tenn., wants two dummy motors and four cars for street car service.

Cells.—J. L. Beach, clerk county commissioner, Brunswick, Ga., will receive proposals until January 7, 1890, for furnishing two or four chrome steel jail cells or cages for the Glynn county jail.

Chair Factory.—H. B. Deas, 24½ S. Broad street, Atlanta, Ga., wants machinery for manufacturing chairs.

Cigarette Factory.—R. F. Whitehurst, Durham, N. C., wants prices on cigarette machines.

Corn Mill and Roofing.—W. A. Bradford, Charleston, W. Va., wants a corn mill and 100 squares of metallic roofing.

Cotton-seed Oil Mill.—D. C. Giddings, Brenham, Texas, wants bids on machinery for a 100-ton cotton-seed oil mill.

Dry-kiln.—A. W. McAlister, Asheboro, N. C., wants prices on patent dry-kilns.

Dry Dock.—The Gulf Dry Dock Co., of Mobile, Ala., wants to correspond with constructors of excavated or Graven dry docks.

Dynamite Factory.—The Standard Dynamite Co., Chattanooga, Tenn., may purchase an agitator for its factory.

Electric-light Plant.—D. C. Giddings, Brenham, Texas, wants bids on an electric-light plant for a town of 8,000 inhabitants.

Electric-light Plant.—D. D. Maddry, Malvern, Ark., wants prices on an electric-light plant.

Elevator.—Robert Leitch & Sons, Washington, D. C., will purchase a freight elevator.

Engine.—Simon Seward & Co., Petersburg, Va., want cash price, delivered, on a new 40-horse-power engine, with 10 to 12-foot balance wheel and 4 to 6-foot driver, to run 150 to 200 revolutions.

Engine.—M. W. Thayer, New Cumberland, W. Va., will purchase a small engine.

Engine and Crusher.—W. T. Finkell, Gate City Glass Co., Atlanta, Ga., will want a 25-horse-power engine and a stone or wheel crusher.

Exhaust Fans.—The Equitable Manufacturing Co., Sylva, N. C., wants an exhaust fan for drying clay.

Fire Engine Equipment.—The town of Eminence, Ky., may purchase equipment for a fire engine-house, etc. Address W. B. Wilson.

Fire Equipments.—South Pittsburgh, Tenn., has appropriated \$1,000 to purchase fire equipments. The mayor can be addressed.

Fire Equipment.—The City of Denison, Texas, has authorized the mayor and chief of fire department to expend \$4,000 for fire equipment.

Flour Mill and Gin.—E. K. Harris, Eagle Cove, Texas, intends adding a small French burr flour mill and a 60-saw cotton gin.

Flour Mill Outfit.—The Adairville Milling Co., Adairville, Ky., wants complete outfit for a 75-barrel flour mill, including a Corliss engine.

Flour Mill.—L. D. Addison, Addison, Ky., will want complete outfit for a roller flour mill.

Flour Mill.—J. M. Cotts, Springfield, Tenn., wants prices on complete outfit for a flour mill.

Flour Mill.—E. M. Spears, Rogersville, Tenn., wants machinery for a 50-barrel roller mill to be operated by water-power.

Gas Engine.—E. K. Harris, Eagle Cove, Texas, will probably purchase a 25-horse-power gas engine.

Gas Works.—The Brush Electric Light & Power Co., Savannah, Ga., wants information and estimates on plant for the manufacture of fuel and illuminating gas.

Glass Works.—W. T. Finkell, Gate City Glass Co., Atlanta, Ga., will want patent chimney crimpers, shafting and pulleys.

Grist Mill and Cotton Gin.—Kirkpatrick & Coleman, Hazen, Ala., will purchase a grist mill, gin feeder, condenser and steam press.

Grist Mill and Gin.—Porter Brodie, Bowie, Texas, will purchase an 18 or 20-inch grist mill and an 80-saw cotton gin.

Grist Mill.—Comer & Reeves, Eufaula, Ala., want a complete outfit for a grist mill, including boilers and engines.

Hardware Factory.—The F. H. Foster Manufacturing Co., Florence, Ala., will purchase elevator, steam plant, blower and cupola for hardware factory to be built at Fort Payne, Ala.

Ice Factory.—Charles Johnson, Tallapoosa, Ga., wants estimates on machinery for an ice factory.

Ice Factory.—D. C. Giddings, Brenham, Texas, wants estimates on machinery for a 10-ton ice factory and refrigerating plant.

Iron Roofing.—D. C. Giddings, Brenham, Texas, wants prices on galvanized iron roofing.

J. S. Cogar, secretary of the Addison Boom Co., and the Webster County Boom Co., of Addison, W. Va., states they will purchase some machinery in the future.

Lathe and Planer.—H. E. Wardwell, Albany, Ga., will probably purchase a 17-inch 8 or 10-foot screw cutting lathe and a 3-foot iron planer.

Pulverizers.—The Equitable Manufacturing Co., Sylva, N. C., is in the market for two pulverizing machines for working flint.

Quarrying Machinery.—An English company has purchased a marble quarry near Winchester, Tenn., and will want quarrying machinery, including engine. J. L. Gorton, of that place, can be addressed.

Railroad Equipment.—The Rockbridge Alum & Goshen Railroad Co., Alum Springs, Va., may want rails for their narrow gauge road previously mentioned. The company desires to lease a narrow-gauge locomotive, and also rolling stock. Address James A. Frazier, Alum Springs, Va.

Rails.—W. A. Bradford, Charleston, W. Va., will buy 15 tons new or second-hand 16-pound steel rails.

Rolling Mill.—Barry Coleman, 410 W. Main street, Louisville, Ky., will probably be in the market next month for rolling mill machinery.

Saw Mill.—Kirkpatrick & Coleman, Hazen, Ala., will purchase a saw mill outfit.

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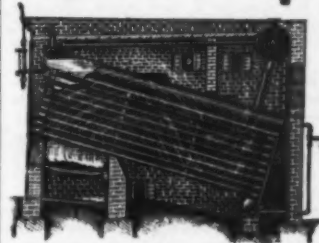
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ORDERS FILLED PROMPTLY.
CHATTANOOGA, TENN.

Saw Mill, etc.—C. H. Daniels, Southern Pines, N. C., will want, if he purchases timber lands, a cut-off saw, gang ripping and lath machine and a 40-horse-power boiler and engine.

Saw Mill.—L. D. Addison, Addison, Ky., will want complete outfit for a saw mill.

Sewerage System.—Wade Allen, chairman committee on sewerage, Florence, Ala., wants estimates for the construction of a sewerage system.

Soap Factory.—Moore, Hull & Co., Savannah, Ga., want catalogues of the latest improved machinery for manufacturing soap; also information about this business.

Stand-pipe.—W. L. Porter, Glasgow, Ky., wants to buy a stand pipe for water works.

Steam Drill and Hoisting Machinery.—Archibald Wilson, superintendent, Sparta, Ga., wants prices on a steam drill and steam hoisting apparatus.

Tannery.—W. L. Powell, 307 S. Wilmington street, Raleigh, N. C., wants estimates on the latest methods and machinery for tanning leather.

Sugar Mill.—E. H. Dorsey, Sunny Side, Ga., wants to buy for next season machinery for the manufacture of sugar.

Lighthouse.—Captain W. S. Flak, U. S. lighthouse engineer, New Orleans, La., will receive proposals until January 15, 1890, for furnishing the materials and labor necessary for the completion and delivery of the metal work for a lighthouse and dwelling for Charlotte Harbor Light Station, Florida.

Woodenware Factory.—H. B. Deas, 24½ S. Broad street, Atlanta, Ga., wants machinery for manufacturing wooden bowls, trays, etc.

Woolen Mill.—C. W. Post, 610 Main street, Fort Worth, Texas, wants prices on woolen mill machinery.

A ROLLING MILL.—ANNISTON, ALA., Dec. 17, 1889.—We regard the establishment of the Anniston rolling mill as assured, and hope to begin work early in January. We wish to start out with a 50-ton mill, embracing a good outfit for making the ordinary forms of car and merchant iron. My address, till Jan. 6, will be Warrenton, Va.
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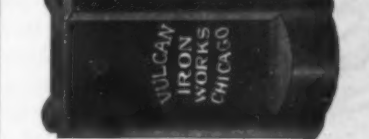
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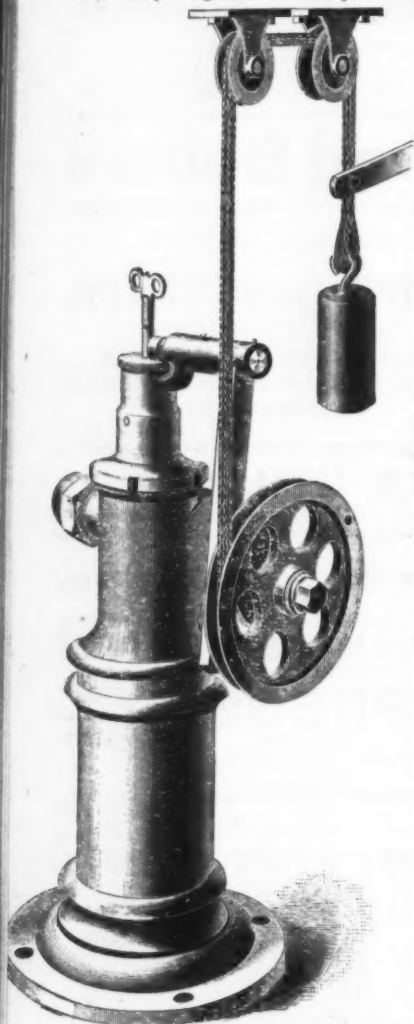
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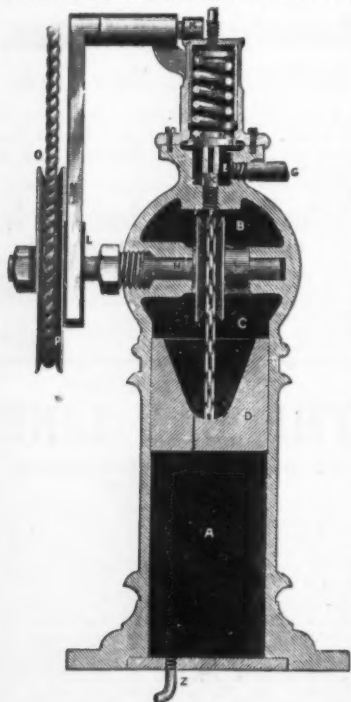
The Mason Steam Damper Regulator.

The accompanying cuts represent the exterior and sectional views of a novel steam damper regulator recently placed on



THE MASON STEAM DAMPER REGULATOR.

the market by the Mason Regulator Co., of Boston. From the outside view it will be readily seen that it is only necessary to set the regulator in some convenient position and attach by a chain to the damper, while a connection is made with the boiler by



SECTIONAL VIEW.

means of a small pipe. The pressure desired to be carried can readily be changed by turning a key as shown.

The practical working of the regulator is as follows, referring to the letters shown

on the sectional view: The boiler pressure, which is connected at the pipe C, comes into the chamber E, the top of which is formed by a diaphragm, on which rests the main spring S. If the boiler pressure rises above the required point, or sufficiently to overcome the tension of the spring S, the diaphragm is raised very slightly and the steam passes down the passage X to the upper surface of the piston D, which it forces down. This piston being connected with the wheel on the shaft H by a chain or rack and pinion, throws it around, communicating a like motion to the outside wheel and thence to the damper in the flue. When the boiler pressure drops, the diaphragm comes on to its seat, which covers the passage X, and steam pressure is removed from the top of the piston D, while the weight on the damper brings the wheel P back to its original position. It is claimed by many engineers that a regulator which suddenly opens and closes a damper to its full capacity, wastes coal, which is undoubtedly true; therefore, a device which is known as a compensating lever is provided in the lever M, which rests on the comb L. As the shaft H turns, the lever is thrown over and works a comb K, which throws the main spring out of adjustment; immediately the regulator commences to act. By this means it is found that the damper is kept more constant and the draft steady. The regulator can be furnished either with or without the compensating lever, as desired. It is entirely made of the best steam metal.

Building Notes.

A'bany, Ga.—The Congregationalists contemplate the erection of a house of worship.

Alvin, Texas.—The report that a college would be established has been confirmed. Work will be commenced shortly. G. W. Durant can give information.

Arkansas City, Ark.—Hotel.—A stock company is being organized to build a \$20,000 hotel.

Atlanta, Ga.—J. W. Murray contemplates the erection of a residence.

Austin, Texas.—Stephen H. Darden, president of board, invites proposals until January 23, 1890, for design of an Alamo monument not to cost over \$14,500.

Bainbridge, Ga.—The erection of an opera-house is being agitated.

Baltimore, Md.—Joseph J. Willis has been awarded the contract for erecting the annex school No. 4 for \$16,993.

Baltimore, Md.—It is reported that the faculty of the Maryland University contemplates the erection of new buildings for that university.

Baltimore, Md.—James M. Cone contemplates erecting a six-story office building on property recently purchased.

Bloxi, Miss.—A building and loan association has been organized with E. W. Morrill as president.

Birmingham, Ala.—It is reported that Southern capitalists will erect an opera-house. J. B. McElfatrick & Sons, New York city, are said to have the contract.

Bowling Green, Ky.—Hotel.—It is reported that a syndicate has been formed for the purpose of building a hotel.

Brooksville, Fla.—A branch of the Southern Building & Loan Association has been organized with Dr. Stringer as president.

Brunswick, Ga.—The Brunswick & Western Railroad Co. will erect a station. The East Tennessee, Virginia & Georgia Railroad Co. (office, Knoxville, Tenn.) may join with them in making it a union depot.

Brunswick, Ga.—J. Lowenstein contemplates, it is stated, the erection of a boarding-house building.

Brunswick, Ga.—The erection of a new city hall is being discussed.

Carrollton, Ga.—A branch of the Southern Mutual Building & Loan Association of Atlanta has been organized with E. G. Krouser, president.

Charleston, S. C.—James H. Windrim, supervising architect, Washington, D. C., invites proposals for the erection of the U. S. courthouse and postoffice building until January 8, 1890.

Columbia, S. C.—The S. C. Presbyterian Institute will remodel recently purchased buildings for the purpose of converting them into college buildings. Hon. W. D. Simpson can give information.

Cumberland Gap, Tenn.—The Cumberland Gap Building & Improvement Co. has been organized with L. F. Hubble, president; capital stock \$250,000.

Dallas, Texas.—The New York Life Insurance Co. reports that it will not erect an office building, as previously rumored.

Dallas, Texas.—W. J. Clark will erect 20 two-story dwellings to cost \$30,000.

Denison, Texas.—A company is being organized by New England capitalists with a capital

stock of \$100,000 for the purpose of building and renting dwellings in Denison.

Denison, Texas.—Edward Leeper and Thomas Boldrick are preparing to erect a four-story business building.

Douglasville, Ga.—A Methodist church is being erected.

Eufaula, Ga.—The Central Railroad & Banking Co. of Georgia (office, Savannah, Ga.) will, it is stated, erect a depot shortly.

Farmersville, La.—A new jail will be erected to cost \$6,000.

Florence, Ala.—It is reported that the Exchange Hotel will be torn down and a block of buildings be erected on the site.

Fortress Monroe, Va.—Dandy & Ashe, of Hampton, Va., are the lowest bidders for the erection of the wharf building previously mentioned, their bid being \$7,439.67.

Fort Worth, Texas.—Three storehouses to cost \$35,000 are to be erected.

Georgetown, S. C.—Hotel.—It is reported that a hotel will be erected.

Georgetown, S. C.—A branch of the Alabama Building & Loan Association has been started with Wm. H. Dorrell, president.

Georgetown, Ky.—The Kentucky Midland Railroad Co. (office, Frankfort, Ky.) is erecting a depot.

Helena, Ark.—It is stated that the Louisville, New Orleans & Texas Railway Co. (office, Louisville, Ky.) will erect a \$12,000 station.

Henrietta, Texas.—A. K. Swan will erect two buildings; P. M. Stone, one building; A. Sneary and W. A. Squires, four buildings. The seven structures will all have iron fronts.

Hillsboro, Texas.—The contract for erecting the Hill county courthouse has been awarded to a Brownwood firm of contractors for \$83,000.

Jackson, Tenn.—A branch of the Interstate Building & Loan Association of Columbus, Ga., has been organized with H. C. Anderson, president.

Jackson, Tenn.—Young & Gettling are the lowest bidders for the erection of the courthouse previously mentioned, their bid being \$22,916. Latting & Bailey, Memphis, were the only bidders on the heating apparatus. Their bid was \$2,050.

Kingston, S. C.—A branch of the Interstate Building & Loan Association of Columbus, Ga., has been organized with D. C. Scott as president.

Kyle, Texas.—J. C. Schlemmer will build a \$5,000 storehouse.

Little Rock, Ark.—Wm. Kirten will erect a dwelling to cost \$10,000.

Little Rock, Ark.—The Little Rock school board may erect a \$10,000 schoolhouse.

Lynchburg, Va.—Wm. M. Poinexter, architect, Washington, D. C., has prepared plans for the erection of an office building to cost \$70,000.

Macon, Ga.—Henry Horn will erect a brick building to be used for business purposes.

Marietta, Ga.—Hotel.—Ervin Maxwell has plans for the erection of a 125-room hotel, which is estimated to cost about \$100,000.

Meridian, Miss.—Hotel.—It is stated that J. C. Lloyd, A. J. Weems and J. S. Solomon will erect a hotel.

Middlesborough, Ky.—The Middlesborough Mechanics & Builders' Association of Kentucky has been incorporated with a capital stock of \$100,000 by W. E. Grubbs, J. A. Early and Chas. G. West.

Milldale, Ky.—A Catholic church, parochial school and priest's residence will be erected.

Morrilton, Ark.—Hotel.—S. F. Speer will erect a three-story hotel.

Murphy, N. C.—J. M. Richardson and others on the building committee invite proposals for the erection of the Cherokee county courthouse previously mentioned.

Nashville, Tenn.—The congregation of Christ's Church contemplate erecting a new house of worship in place of the old one just sold.

Nashville, N. C.—A branch of the People's Building & Loan Association of Minneapolis, Minn., has been organized with J. P. Arrington, president.

New Decatur, Ala.—Twenty-five dwellings to cost about \$2,000 each will be erected by Mr. Carey.

Pine Bluff, Ark.—The erection of an opera-house is being agitated. S. F. Hiltzheim can give information.

Portsmouth, Va.—It is reported that the Seaboard & Roanoke Railroad Co., the Atlantic & Danville Railway Co. (office, Norfolk, Va.) and the Norfolk & Carolina Railroad Co. (office, Norfolk, Va.) contemplates erecting a union depot.

Richmond, Va.—The erection of a Masonic widows and orphans' home is contemplated. A. G. Babcock can give information.

Savannah, Ga.—Plans have been made by Engineer Curtis for the construction of a new quarantine station.

Savannah, Ga.—The Savannah Cotton Press Association contemplates rebuilding its warehouse previously reported as burned.

Selma, Ala.—W. B. Gill contemplates the erection of a block of buildings on the site of the Gill Hotel, recently reported as burned.

Sequin, Texas.—Guadalupe county will erect a new county jail.

Steelton, Md.—J. C. Coder, contractor, will erect 37 residences.

St. Augustine, Fla.—Floating Hotel.—It is stated that E. E. Vail, of St. Augustine, has purchased the steamer Rockledge and will convert it into a floating hotel.

Suffolk, Va.—The Norfolk & Carolina Railroad Co. (office, Norfolk, Va.) will erect a freight warehouse. Johnson & Andrews have contract for lumber. W. B. Ferguson & Co. will also erect a warehouse 30x100 feet. H. R. Culley has contract.

Walterboro, S. C.—The erection of a Y. M. C. A. building is being talked of.

Washington, D. C.—Wright & Stockett will erect three dwellings to cost \$7,000; John F. Waggaman, three dwellings to cost \$10,000; Galloway & Son, a dwelling to cost \$8,000; John McGregor, builder, three dwellings to cost \$16,000; W. E. Turton, two dwellings to cost \$5,000; W. A. Kimmell, builder, a block of buildings; Simon Carmody, seven houses to cost \$30,000; plans have been prepared by W. C. Frederic for two dwellings to cost \$10,000.

West Virginia—Hotel.—It is reported that Philadelphia parties interested in the Norfolk & Western Railroad Co., mentioned elsewhere in this issue, who contemplate founding a town near Ceredo to be called Kimball, will erect a hotel to cost \$40,000.

Wilmington, N. C.—It is reported that George L. Hart & Co., butter and cheese dealers, New York city, contemplate the erection of a cold-storage warehouse.

THE Oglethorpe Echo, of Lexington, Ga., says: "There are as many as ten families applicants for houses in Lexington, with not a vacant dwelling to meet the demand. At the present low prices for building and material a dividend of from 10 to 20 per cent. awaits the monied men who will thus lay out their surplus wealth."

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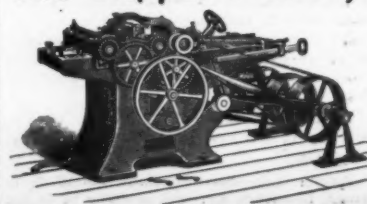
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PROPOSALS.

THE City of Marlin, Texas, will receive bids for putting in a system of water works until 2 o'clock P. M. Wednesday, January 8th, according to specifications, which will be furnished upon application to C. J. BARTLETT, City Secretary or A. HORNE, Chairman Water Works Committee. WM. SHELTON, Mayor.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 14th day of January, 1890, for all the labor and materials required to complete the approaches to the U. S. Court House, Post Office, &c., building at Rochester, New York, in accordance with the drawing and specification, copies of which may be had on application at this office or the office of the Superintendent. Each bid must be accompanied by a certified check for \$100. The department will reject all bids received after the time fixed for opening the same; also, bids which do not comply strictly with all the requirements of this invitation. JAS. H. WINDRIM, Supervising Architect. December 17th, 1889.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 6th day of January, 1890, for furnishing and putting in place complete in the U. S. Court House and Postoffice building at Fort Smith, Ark., one hydraulic passenger elevator, in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Superintendent. Each bid must be accompanied by a certified check for \$100. The department will reject all bids delivered after the time fixed for opening the same; also, bids which do not comply strictly with all the requirements of this invitation. JAS. H. WINDRIM, Supervising Architect. December 17th, 1889.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 8th day of January, 1890, for all the labor and materials required for the erection and completion of all the stone and brick masonry of the superstructure of the U. S. Postoffice, Court-house, &c., building at Charleston, S. C., in accordance with the drawings and specification, copies of which may be had on application at this office and the office of the Superintendent. Each bid must be accompanied by a certified check for \$500. The department will reject all bids delivered after the time fixed for opening the same; also, bids which do not comply strictly with all the requirements of this invitation. JAS. H. WINDRIM, Supervising Architect. December 17th, 1889.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 4th day of January, 1890, for all the labor and materials required to build the brick manholes and trap-well, flush and lay all the terra cotta sewer-pipe, cast-iron drain and down-pipe, &c., required for the Postoffice, &c., building at Brooklyn, N. Y., in accordance with the drawings and specification, copies of which may be had on application at this office and the office of the Superintendent. Each bid must be accompanied by a certified check for \$100. The department will reject all bids received after the time fixed for opening the same; also, bids which do not comply strictly with all the requirements of this invitation. JAS. H. WINDRIM, Supervising Architect. December 17th, 1889.

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1 Engine Lathe—36 in. x 30 ft.; 60 in. x 27 ft.; 48 in. x 22 ft.; 36 in. x 18 ft.; 24 in. x 15 ft.; 24 in. x 10 ft.; 24 in. x 8 ft.; 24 in. x 6 ft.; 24 in. x 4 ft.; 24 in. x 3 ft.; 24 in. x 2 ft.; 24 in. x 1 ft.; 24 in. x 1/2 ft.; 24 in. x 1/4 ft.; 24 in. x 1/8 ft.; 24 in. x 1/16 ft.; 24 in. x 1/32 ft.; 24 in. x 1/64 ft.; 24 in. x 1/128 ft.; 24 in. x 1/256 ft.; 24 in. x 1/512 ft.; 24 in. x 1/1024 ft.; 24 in. x 1/2048 ft.; 24 in. x 1/4096 ft.; 24 in. x 1/8192 ft.; 24 in. x 1/16384 ft.; 24 in. x 1/32768 ft.; 24 in. x 1/65536 ft.; 24 in. x 1/131072 ft.; 24 in. x 1/262144 ft.; 24 in. x 1/524288 ft.; 24 in. x 1/1048576 ft.; 24 in. x 1/2097152 ft.; 24 in. x 1/4194304 ft.; 24 in. x 1/8388608 ft.; 24 in. x 1/16777216 ft.; 24 in. x 1/33554432 ft.; 24 in. x 1/67108864 ft.; 24 in. x 1/134217728 ft.; 24 in. x 1/268435456 ft.; 24 in. x 1/536870912 ft.; 24 in. x 1/1073741824 ft.; 24 in. x 1/2147483648 ft.; 24 in. x 1/4294967296 ft.; 24 in. x 1/8589934592 ft.; 24 in. x 1/17179869184 ft.; 24 in. x 1/34359738368 ft.; 24 in. x 1/68719476736 ft.; 24 in. x 1/137438953472 ft.; 24 in. x 1/274877906944 ft.; 24 in. x 1/549755813888 ft.; 24 in. x 1/1099511627776 ft.; 24 in. x 1/2199023255552 ft.; 24 in. x 1/4398046511104 ft.; 24 in. x 1/8796093022208 ft.; 24 in. x 1/17592186044416 ft.; 24 in. x 1/35184372088832 ft.; 24 in. x 1/70368744177664 ft.; 24 in. x 1/140737488355328 ft.; 24 in. x 1/281474976710656 ft.; 24 in. x 1/562949953421312 ft.; 24 in. x 1/1125899906842624 ft.; 24 in. x 1/2251799813685248 ft.; 24 in. x 1/4503599627370496 ft.; 24 in. x 1/9007199254740992 ft.; 24 in. x 1/18014398509481984 ft.; 24 in. x 1/36028797018963968 ft.; 24 in. x 1/72057594037927936 ft.; 24 in. x 1/144115188075855872 ft.; 24 in. x 1/288230376151711744 ft.; 24 in. x 1/576460752303423488 ft.; 24 in. x 1/1152921504606846976 ft.; 24 in. x 1/2305843009213693952 ft.; 24 in. x 1/4611686018427387904 ft.; 24 in. x 1/9223372036854775808 ft.; 24 in. x 1/18446744073709551616 ft.; 24 in. x 1/36893488147419103232 ft.; 24 in. x 1/73786976294838206464 ft.; 24 in. x 1/147573952589676412928 ft.; 24 in. x 1/295147905179352825856 ft.; 24 in. x 1/590295810358705651712 ft.; 24 in. x 1/1180591620717411303424 ft.; 24 in. x 1/2361183241434822606848 ft.; 24 in. x 1/4722366482869645213696 ft.; 24 in. x 1/9444732965739290427392 ft.; 24 in. x 1/18889465931478580854784 ft.; 24 in. x 1/37778931862957161709568 ft.; 24 in. x 1/75557863725914323419136 ft.; 24 in. x 1/151115727451828646838272 ft.; 24 in. x 1/302231454903657293676544 ft.; 24 in. x 1/604462909807314587353088 ft.; 24 in. x 1/1208925819614629174706176 ft.; 24 in. x 1/2417851639229258349412352 ft.; 24 in. x 1/4835703278458516698824704 ft.; 24 in. x 1/9671406556917033397649408 ft.; 24 in. x 1/19342813113834066795298816 ft.; 24 in. x 1/38685626227668133590597632 ft.; 24 in. x 1/77371252455336267181195264 ft.; 24 in. x 1/154742504910672534362390528 ft.; 24 in. x 1/309485009821345068724781056 ft.; 24 in. x 1/618970019642690137449562112 ft.; 24 in. x 1/1237940039285380274899124224 ft.; 24 in. x 1/2475880078570760549798248448 ft.; 24 in. x 1/4951760157141521099596496896 ft.; 24 in. x 1/9903520314283042199192993792 ft.; 24 in. x 1/19807040628566084398385987584 ft.; 24 in. x 1/39614081257132168796771975168 ft.; 24 in. x 1/79228162514264337593543950336 ft.; 24 in. x 1/158456325028528675187087900672 ft.; 24 in. x 1/316912650057057350374175801344 ft.; 24 in. x 1/633825300114114700748351602688 ft.; 24 in. x 1/1267650600228229401496703205376 ft.; 24 in. x 1/2535301200456458802993406410752 ft.; 24 in. x 1/5070602400912917605986812821504 ft.; 24 in. x 1/10141204801825835211973625643008 ft.; 24 in. x 1/20282409603651670423947251286016 ft.; 24 in. x 1/40564819207303340847894502572032 ft.; 24 in. x 1/81129638414606681695789005144064 ft.; 24 in. x 1/162259276829213363391578010288128 ft.; 24 in. x 1/324518553658426726783156020576256 ft.; 24 in. x 1/649037107316853453566312041152512 ft.; 24 in. x 1/1298074214633706907132624082305024 ft.; 24 in. x 1/2596148429267413814265248164610048 ft.; 24 in. x 1/5192296858534827628530496329220096 ft.; 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24 in. x 1/5444517870735015415413993718908291383296 ft.; 24 in. x 1/10889035741470030830827987437816582766592 ft.; 24 in. x 1/21778071482940061661655974875633165533184 ft.; 24 in. x 1/43556142965880123323311949751266331066368 ft.; 24 in. x 1/87112285931760246646623899502532662132736 ft.; 24 in. x 1/174224571863520493293247799005065324265472 ft.; 24 in. x 1/348449143727040986586495598010130648530944 ft.; 24 in. x 1/696898287454081973172991196020261297061888 ft.; 24 in. x 1/1393796574908163946345982392040522594123776 ft.; 24 in. x 1/2787593149816327892691964784081045188247552 ft.; 24 in. x 1/5575186299632655785383929568162090376495104 ft.; 24 in. x 1/11150372599265311570767859136324180752990208 ft.; 24 in. x 1/22300745198530623141535718272648361505980416 ft.; 24 in. x 1/44601490397061246283071436545296723011960832 ft.; 24 in. x 1/89202980794122492566142873090593446023921664 ft.; 24 in. x 1/178405961588244985132285746181186892047843328 ft.; 24 in. x 1/356811923176489970264571492362373784095686656 ft.; 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24 in. x 1/46768052394588893382517914646921056628989841375232 ft.; 24 in. x 1/93536104789177786765035829293842113257979682750464 ft.; 24 in. x 1/187072209578355573530071658587684226515959365500928 ft.; 24 in. x 1/374144419156711147060143317175368453031918731001856 ft.; 24 in. x 1/748288838313422294120286634350736906063837462003712 ft.; 24 in. x 1/1496577676626844588240573268701473812127674924007424 ft.; 24 in. x 1/2993155353253689176481146537402947624255349848014848 ft.; 24 in. x 1/5986310706507378352962293074805895248510699696029696 ft.; 24 in. x 1/11972621413014756705924586149611790497021399392059392 ft.; 24 in. x 1/23945242826029513411849172299223580994042798784118784 ft.; 24 in. x 1/47890485652059026823698344598447161988085597568237568 ft.; 24 in. x 1/95780971304118053647396689196894323976171195136475136 ft.; 24 in. x 1/191561942608236107294793378393788647952342390272950272 ft.; 24 in. x 1/383123885216472214589586756787577295904684780545900544 ft.; 24 in. x 1/766247770432944429179173513575154591809369561091801088 ft.; 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TRADE NOTES.

THE Vulcan Iron Works Co., of Toledo, Ohio, have superseded the old "Vulcan Iron Works" in the manufacture of steam shovels, railroad excavators, hoisting machinery, &c., of the highest class. Recent new improvements in their famous "Giant" excavators will be appreciated by all progressive railroad builders. There are a number of Giant excavators doing good work in the South.

THE Wainwright Manufacturing Co., of Boston, Mass., manufacturers of corrugated tube feed-water heaters, office 34 Oliver street, Boston, have recently filled orders for large concerns in Canada, Pennsylvania, Maine, Colorado and Illinois, mostly for electric-light and tramway companies. The Wainwright Co. are prepared to fill all acceptable orders with the utmost promptness and dispatch.

TEXTILE MANUFACTURES AND DRY GOODS TRADE.—One of the most valuable of our trade annuals is Dockham's American Report and Directory of the Textile Manufacture and Dry Goods Trade of the United States, Canada and Mexico. The data given covers the cotton, woolen, silk, jute and linen manufactures in the countries named, and is of special value to the trade and useful in many respects for reference purposes. The work gives the names and location of manufacturers in alphabetical order, and the establishments operated by States, with capacity, motive power used, etc. The twelfth volume of the report just issue completes the twenty-fourth year of its compilation. C. A. Dockham & Co., 131 Devonshire street, Boston, publishers.

THE Bucyrus Foundry & Manufacturing Co., of Bucyrus, Ohio, the well known makers of steam excavating machinery, are running their works night and day, and report orders still coming in. They have just taken a contract to build five large steam shovels for the Northern Pacific Railroad Co. This is believed to be the largest order for steam shovels ever placed by any railroad in this country at one time, and makes 11 steam shovels sold by the Bucyrus Works to the Northern Pacific Road. During the present year the Lake Shore & Michigan Southern Railroad Co. has bought four large Bucyrus shovels. The company has recently contracted to furnish three large land dredges to a party in Utah. They are to be used in constructing a canal at Bear lake in that Territory. Orders for three large steam shovels to go to the iron ore district on Lake Superior have recently been accepted. These shovels are to be used for handling iron ore from the stock piles during the season of navigation.

ICE-MAKING MACHINERY.—The Hercules Iron Works, manufacturers of heavy machinery, Canal and Carroll streets, Chicago, Ill., mail, on application, their descriptive catalogue of ice-making and refrigerating machinery and apparatus. The firm claim for their machines exceptional and peculiar merits. Their apparatus is in use at various points for cold-storage, brewery and other purposes, and is rapidly growing in favor. The Chattanooga (Tenn.) Ice & Bottling Co., recently supplied with the Hercules apparatus, liked it so well that they ordered an additional system of 45 tons capacity. We have striven to point out to our Southern friends the marvellous advantages of cold-storage and refrigeration processes which place the Southern grazier and pork-raiser on terms of absolute equality with Northern and Western farmers, and to those of the planters and packers in the South who recognize the ability of this section to reap its just share of the profits of the stock-raising business, we cordially commend the Hercules Co. and kindred concerns.

THE Short Electric Railway, Cleveland, Ohio, publish for the trade an elegantly illustrated catalogue descriptive of the Short system of electric railway. The company make it a rule to study the particular conditions and requirements of every given locality and furnish the most suitable appliances. A striking feature of the Short system is the thorough overhead construction and superior safety-guard wire. The series and parallel systems are used, the former preferable for double track and heavy traffic. It is claimed for the Short motors that they are less bulky and more efficient than others and entirely durable. The motors, too, are controllable at all times, and can be run, if desired, with a low voltage, thus securing absolute safety. The Short Co. have recently filled orders for lines in Cincinnati, Covington, Muskegon, Michigan and St. Louis, and their appliances are in use at many other points and giving perfect satisfaction.

THE new catalogue recently issued by Messrs. Abendroth & Root Manufacturing Co., 28 Cliff street, New York, reflects much credit on all interested in its make-up. The book consists of nearly fifty pages of well-written text, generously illuminated by finely-drawn engravings, and treats at length of the construction and advantages of the new Root water tube safety boiler made by the company. This is supplemented by twenty-three pages of tabulated data of interest and value to engineers and steam users generally. As a frontispiece is shown a finely executed lithographic view of the extensive works of the Abendroth & Root Manufacturing Co., located at Greenpoint, Brooklyn, N. Y. The special department devoted exclusively to the manufacture of the Root water tube boiler comprises the pattern shop, foundry with daily capacity of ten tons, boiler shop, machine shop, erecting shop and testing room. These, with the plate iron shop, sheet iron shop, blacksmith shop, storehouse, shipping department, brass shop and general offices, are all shown in the view mentioned.

THE MANUFACTURERS' RECORD comes to us now with a pretty cover and a neat and tasty new head. They have retained the old head for the inside pages, and now with two illuminated heads on the paper and a half dozen bright heads working for its success and the interest of its readers, the Press feels like backing the MANUFACTURERS' RECORD more strongly than ever in the race for supremacy in the field of industrial journalism.—Anniston (Ala.) Press.

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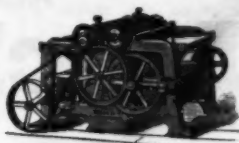
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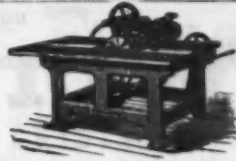
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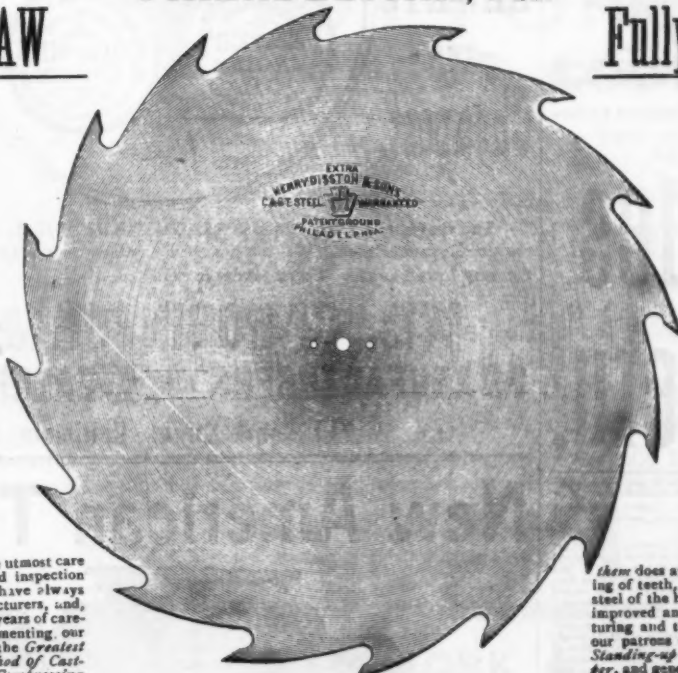
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trial. TRY ONLY. Send for Circulars to C. Rogers & Co., Buffalo, N. Y.; Hart Emery Wheel Co., Ltd., Hamilton, Ont.; William Ford, Halifax, Eng.; For sale by Union Stone Co., Boston and New York; J. S. Graham & Co., Co., Bradford, Can.; A. R. Williams, Toronto, Can.; Machinery Supply Co., Montreal, Q.; Bagshaw Bros., London, Eng.; Bagshaw Bros., Paris, France; McKinnon & Co., Sydney, N. S. Wales.

SAMUEL C. ROGERS & CO., BUFFALO, N. Y.

FOR SALE.
WOOD-WORKING MACHINERY, full line, with latest improvements. Write for circulars and price-list. RENTEL, MARCEAUX & CO., HAMILTON, ONT.

THOS. F. EGAN, Pres.

EDWIN RUTHVEN, Secy.

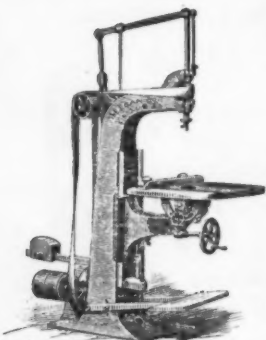
FREDERICK DANNER, Supt.

Wood-Working Machinery

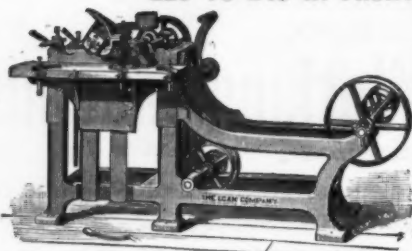
The Largest and Most Complete Line in the United States is Manufactured by

THE EGAN COMPANY,

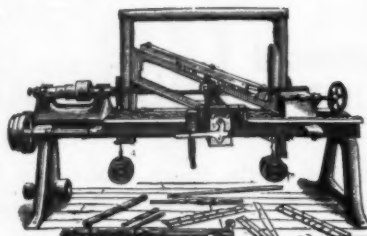
228 TO 248 W. FRONT STREET, CINCINNATI, OHIO, U. S. A.



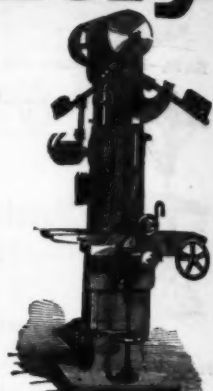
Vertical Boring Machine.



6-inch Sticker.

Complete Outfits
Furnished.Send for Catalogue
and Prices.

Automatic Gauge Lathes.



No. 4 Mortiser.

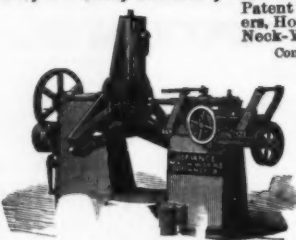
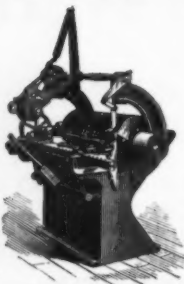
DEFIANCE MACHINE WORKS, Defiance, Ohio. ESTABLISHED 1850.

Manufacturers of HUB, SPOKE, WHEEL, BENDING, WAGON AND CARRIAGE MACHINERY,

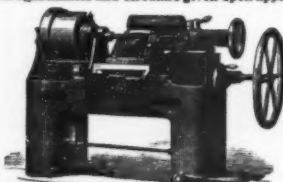
Patent Plow-Handle Benders, Shapers, Cut-Off Saw and Revolving Polishers, Hot-Form, Double and Single Bent Pole and Express Shaft Benders, Neck-Yoke, Singletree, Brush Handle Lathes and Finishing Machines.

Complete Outfits Furnished, Estimates and Circulars given upon application.

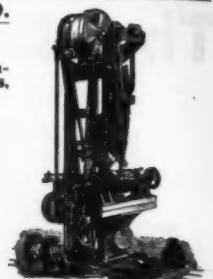
Patent Automatic Combined Spoke Turning and Squaring Machine for common, seven patent, or sharp-edged spoke turning. Capacity 2,000 per day.



Wheel Boxing Machine.



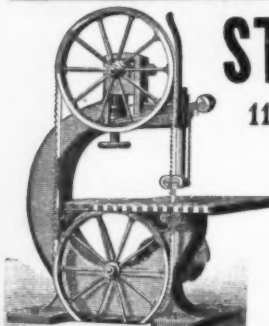
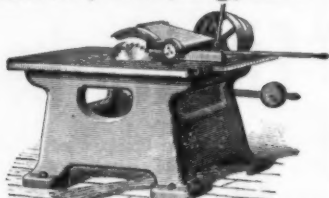
Patent Hub Turning Machine.



Patent Automatic Double-Chisel Hub Mortising Machine. Built in three sizes.

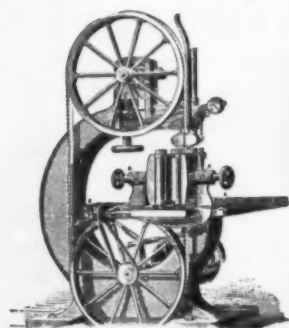
STANDARD MFG. CO.

110 to 132 Main St., Edinburg, Ind.

\$80 will buy the best Band Saw in the world.
\$100 will buy our new patent 40-inch Band Saw.\$100 will buy the best Automatic Rip Sawing Machine, (weather-boarding attachment included) and Saw.
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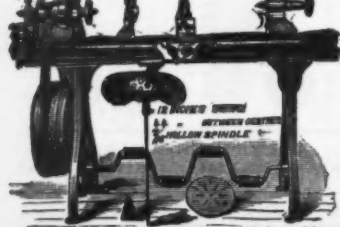
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\$185 will buy our New Patent Band Re-Sawing Machine.

Barnes' Patent Foot Power Machinery.

Complete outfit for Actual Workshop Business. Lathes for Wood or Metal. Circular Saws, Scroll Saws, Formers, Mortisers, Tenoners, Etc., Etc.



If desired, these machines will be sold ON TRIAL. The purchaser can have ample time to test them in his own shop and on the work he wishes them to do. Descriptive Catalogue and Price-List Free. W. E. & JOHN BARNES CO., No. 231 Ruby St., Rockford, Ill.

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Greater efficiency and better economy of steam guaranteed by using the Barnard Vacuum System for circulating either exhaust or live steam in heating coils, radiators, drying rooms, drying cans, paper machinery, breweries, etc. Send for circular and further information to

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ESTABLISHED 1832 ON PRESENT PREMISES.

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ALWAYS
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Therefore
BUY OUR
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Perfect Oils

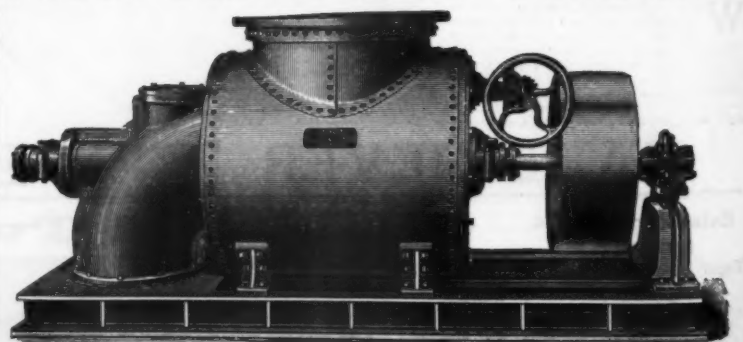
The above are our specialties in MACHINERY OILS, and are the best oils for the price manufactured. We can give you anything in the OIL LINE, any grade, at the very lowest prices. Correspondence solicited.

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MANUFACTURERS AND DEALERS IN OILS,

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New American Turbine.



THE above engraving represents a single 16-inch NEW AMERICAN TURBINE, placed in a horizontal flume mounted on an iron bed. We are prepared to furnish two wheels in a flume of the same construction from 6-inch to 34-inch diameter, also vertical wheels from 6-inch to 66 inches. These wheels are admirably adapted to drive any kind of Machinery where steadiness of motion is required. For descriptive catalogues, address

STOUT MILLS & TEMPLE, Dayton, Ohio

Hoisting Engines for Mines, Furnace & Factory



Hoisting • Machinery

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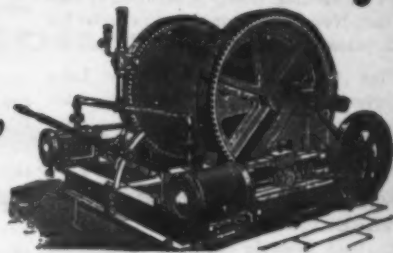
300 STYLES AND SIZES.
OVER 5,000 IN USE.

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FURNACE HOISTS,
Horizontal Engines

FOR MANUFACTURING.

New Catalogue for 1889.



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34 & 36 WEST MONROE STREET, CHICAGO.
197 TO 203 CONGRESS STREET, BOSTON.



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NEW YORK.
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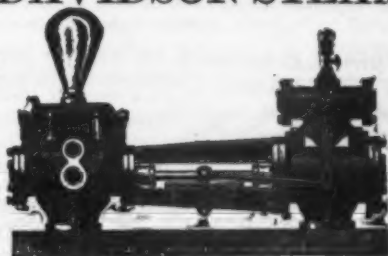
SOLE AGENTS IN THE U. S. FOR

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GENERAL AGENT CELEBRATED TANITE EMERY WHEELS.

The M. T. DAVIDSON STEAM PUMP.

Simple,
EFFICIENT,
Reliable,
FOR ALL
PURPOSES
AND
DUTIES.



MADE IN
ALL SIZES,
SINGLE OR
Duplex.
ALSO
COMPOUND
Pumping
ENGINES.

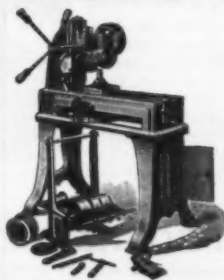
DAVIDSON STEAM PUMP CO., 77 Liberty St., NEW YORK.

The D. E. Whiton Machine Co.

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— MANUFACTURE A —
SIMPLE, CONVENIENT,
ACCURATE and
MODERATE PRICED

Gear Cutting Machine



Which will do ALL KINDS of Gear Cutting, including Worm
Bevel and Face Wheels. It is in Extended Use through-
out North and South, and FULLY WARRANTED.
Sent on trial to responsible parties. Send for circulars.

CURRY COTTON COMPRESS.

GREAT ECONOMY

in first cost, and in operating costs about half as much as the steam presses. Will
compress 400 bales to commercial size in TEN HOURS, at a fuel expense of
ONE CENT per bale and a total expense of less than TEN CENTS per bale.

Especially Adapted to Points where from 10,000 to 30,000 bales are received.

SPLENDID INVESTMENT.

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MANUFACTURERS OF

Cotton Compresses & Cotton-Seed Oil Machinery

DAYTON, OHIO, U. S. A.



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WALLWORK & WELLS' PATENTS. (Registered
Title.)

Powerful Portable Light UP TO 2,000 C. P.

Self Contained. No Outside Motive Used. Complete in Itself, as shown by Accompanying
Cut. Simple in Construction. Any Laborer can handle it.

2,000 SOLD LAST SEASON.

UNAFFECTED BY WEATHER.

KEEGAN & HALPIN,

44 & 46 Washington St.,
NEW YORK.

FOR FULL INFORMATION
APPLY TO

TRADE NOTES.

THE Sterling Emery Wheel Co., 17 Dey street, New York, issue a neat calendar for the year 1890.

ICE MACHINE FOR SALE.—The Lake Region Ice Co., Eustis, Fla., offer for sale a five-ton Stratton ice machine, in good order, together with the good will of their business.

COAL AND TIMBER LANDS.—J. V. Kelly, Tazewell Courthouse, Va., advertises in this issue valuable coal, iron and timber lands, and invites correspondence relative to the same.

A HANDSOME CALENDAR.—The Falls City Lithograph & Job Printing Co., 233 W. Main street, Louisville, Ky., issue a large wall calendar for 1890, handsomely printed in colors.

OILLESS BEARINGS.—Mr. J. Stuart Brown, representing the North American Metaline Co., 33-37 Bleecker street, New York, has just arranged for large orders from the government for his company's tried and proved oilless bearings.

UNIVERSAL MILLING MACHINERY.—The The Garvin Machine Co., Lighthouse and Canal streets, New York, are prepared to furnish outfits of the above-mentioned description, the merits of which have been fully tested and approved. An illustrated descriptive circular is mailed upon application.

A PROSPERING CONCERN.—The Lowe-Geeding Electric Co., Neosho, Mo., which recently purchased the interests of the Sprague-Warden Electric Co., of Carthage, Mo., report that they are receiving orders from every State and Territory, and recently secured one from Melbourne, Australia.

F. E. MYERS & BRO., Ashland, Ohio, have recently equipped their establishment with the best of improved machinery, and are prepared to meet the growing demand for their wood and steel track hay-carriers, &c. Their foundry has also been supplied with three new Tector molding machines, and the firm is in a position to promptly fill all orders in their line.

BEEHIVE POWER PLANT.—E. A. Parsons, Salem, Va., invites correspondence with parties who may desire to secure space in a "beehive" power plant which will be erected by a joint stock company now organizing. The company will have \$60,000 capital, and the plant will have 50,000 square feet of space, with power for large or small manufactures.

The Eclipse Wind Engine Co., of Beloit, Wis., well known as manufacturers of a famous friction clutch pulley which has kept them hustling to keep up with orders, are now the exclusive manufacturers of the "Williams automatic (close regulating) engine," so popular for electric lighting and where a high service and perfect regulation is required. An elegant new plant has been erected for the manufacture of this engine (exclusively) adjoining the already large plant of this enterprising concern, who also are doing a large business in railroad water tank and water supply stations.

IMPROVED STEAM HAMMERS.—David Bell, Buffalo, N. Y., mails on application an illustrated catalogue and price-list of "Bell's improved patent steam hammers." These hammers are of very simple construction, but are very strong. They are self-acting, taking steam at both ends of the cylinder, and all of the sizes strike a square blow. They can be made "double" or "single" acting at will, the change being easily effected. The hammers can be managed and repaired with little trouble, and, it is claimed, are 50 per cent. cheaper than any other fitted for the same kind of work.

THE Stover Manufacturing Co., of Freeport, Ills., have added yet another important branch to their already large plant, which will be known under the name of the Stover Bicycle Co., the product being a safety bicycle of a very high grade, said by experts "to have many features superior to any machine on the market." In the spring this concern will bring out a boy's safety bicycle that will "go" the present best machine "one better."

THE FIRST STEEL BLOOMING MILL FOR THE SOUTH.—The Totten & Hogg Iron & Steel Foundry Co., of Pittsburgh, Pa., have received an order from the Fort Payne Rolling Mill, of Fort Payne, Ala., through their vice-president and general manager, Mr. A. W. Train, for the first steel blooming mill for the South. It is a 32-inch mill of most modern equipments, and includes two 30x48 reversing engines and gearing for driving same. The order also includes a complete 22-inch nail plate train; a complete 16-inch bar train, with five sets of roll housings; a 9-inch guide train complete; large ingot shear to cut up to 7x10, with engine; a small bar shear and engine and roll lathe. This is probably the largest amount of rolling mill machinery yet ordered from the South in any one contract, but is no doubt only the beginning of such expenditures in the near future for the manufacture of steel. This foundry company also report that they have under way for the Shelby Rolling Mill Co., Helena, Ala., an ordinary size squeezer; also a large squeezer, of which they are the only makers, for the Apollo Iron & Steel Co., of Apollo, Pa.; also rolls sand and chilled for various mills, among others 30x100 chilled rolls for Chester Rolling Mills. They have been very successful in rolls of this size. The demand for their Forster rock and ore breakers has also been good.

RAPID PROGRESS.

What has been Done in Eleven Weeks at Salem, Virginia.

On the 2nd of October last, the Salem Improvement Company, of Salem, Virginia, was organized with an authorized capital of \$1,000,000. Of this amount there was issued only \$300,000, which was all taken within a month, and at once sold at a premium. The Company purchased 900 acres of land adjoining the town, laid out streets, and placed the first lots on sale December 11th. Ten days from the beginning of the sale, and only eleven weeks from the organization of the Company, 700 lots had been sold for more than \$300,000, and the stock of the Company advanced to 300; the foundations of the first iron furnace have been laid; an extensive steam tannery has been secured; two large brick works—capacity 100,000 a day—and a manufactory of tile piping have been located; plans are on foot for a rolling mill, a "Beehive" power plant, and an electric light plant; various large enterprises are in prospect, including one that will employ two hundred women; and hundreds of business houses and residences will be built at an early day.

The Improvement Company, of which Mr. J. W. F. Allemon is President, offers to give ample sites for manufactures along the railroad track and the Roanoke River. The Norfolk & Western will begin at once to lay a double track from Salem to Roanoke, and will build at Salem the finest passenger station on the line of the road; and the indications are favorable for the early completion of the Baltimore & Ohio road from Lexington to Salem, a gap of only fifty-four miles, which is already nearly graded the whole distance; and also for the extension of the Chesapeake & Ohio road from Buchanan to Salem, only twenty-nine miles.

THE MANUFACTURERS' RECORD comes to us dressed in a neat cover which will be its regular dress in the future. The MANUFACTURERS' RECORD is a staunch friend of Southern enterprises, and has done a great deal towards making it what it is to-day, and should be liberally patronized by every town and hamlet in the country.—The York (S. C.) Enterprise.

"THE COLLIAU"

NEW AND IMPROVED
HOT BLAST CUPOLA,
(patent March, 1884), and New
Smokeless and Automatic Feed
Boiler (pat. 1886, in U. S.)
Correspondence solicited for
plans of foundries and the econ-
omical working of cupolas, the
saving of fuel in melting iron
and steel, and in the production
of steam. Address **VICTOR
COLLIAU**, Mechanical Engi-
neer and Architect, 287 Jeff-
erson Avenue, Detroit, Mich.

FOR
**Ice-Making and Refrigerating
MACHINERY,**

ADDRESS THE
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OFFICE:
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OILLESS BEARINGS.
They will run for years
without oil. Perfectly
clean. No cutting or
danger of fire from
overheating. Send for
New Circular of interest
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Pulleys.

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**Hardware and Gun Trade: Quote our
\$5 Clay Pigeon Trap.**

Electrotypes furnished gratis for catalogues.
Liberal commissions. 8c-page book free. Address:
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**RIBBON, RUBBER, BRASS AND STEEL
DATING, CANCELING and OFFICE STAMPS
OF EVERY DESCRIPTION.**
Rubber Type, Steel Letters and Figures,
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Fine Iron and Brass Castings Made to Order.
Manufacture those celebra-
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WIRE RAILING
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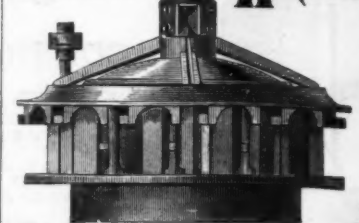
DUPOR & CO. 113 & 115 N. Howard St., Baltimore.

Wire Railing for Cemeteries, Lawns, Gardens, Offi-
ces and Balconies; Window Guards, Tree Guards,
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WIRE & WIRE GOODS.
Wire Cloth, Rope, SCREENS for
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Plain Fencing Wire. Bank
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Artistic Work a Specialty.
Send for catalogue and mention this paper.

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Water Wheel.



This Wheel is strong and durable. Excelled
all other wheels in the great trial tests. Is in use
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HEAVY GEARING & MACHINERY

For Paper, Cotton and Grist Mills.
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**THE IMPROVED LANCASTER
Turbine Wheel.**



Lancaster Turbine Wheel Co. Lancaster, Pa.

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Desiring a Staple Article on Royalty or
Shop Right. For particulars of the "Lan-
dis Patent Steam and Hot Water Radia-
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German and English Brands of
Best Quality.

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from 5 to 110 horse power, both Vertical and Hor-
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ers. 1400 in use. Boilers of every style. Auto-
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Pumping Machinery for Drainage or Irrigation.
Established 25 years. Perfect satisfaction guaran-
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HUGHES STEAM PUMP CO.
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MANUFACTURERS OF
Single, Duplex and Compound Pumps
FOR ALL DUTIES.
WATER WORKS PUMPING ENGINES.
SEND FOR CATALOGUES AND PRICE LISTS.
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The Most Simple, Reliable, Durable and Economical in Existence.

WHAT PEOPLE SAY.

"I consider it the greatest improvement that has ever been made in breweries."—FRED. PABST, President Ph. Best Brewing Co. "We are thoroughly satisfied with your machine, and we believe it is superior to any other in the market to-day."—HENRY G. KUERT, President Atlanta City Brewing Co., Atlanta, Ga.

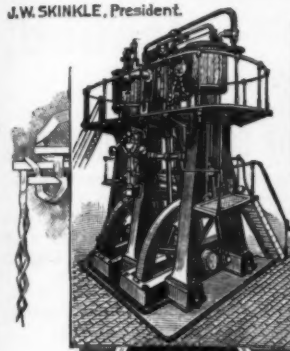
ESTIMATES FOR ICE OR REFRIGERATING MACHINES FURNISHED ON APPLICATION.

REFER TO OVER 140 MACHINES IN SUCCESSFUL OPERATION.

J.W. SKINKLE, President.

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UPON
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All machines built by us are made to gauge and templet. Highest economy secured. Best results obtained. Machines in steady operation for more than ten years.

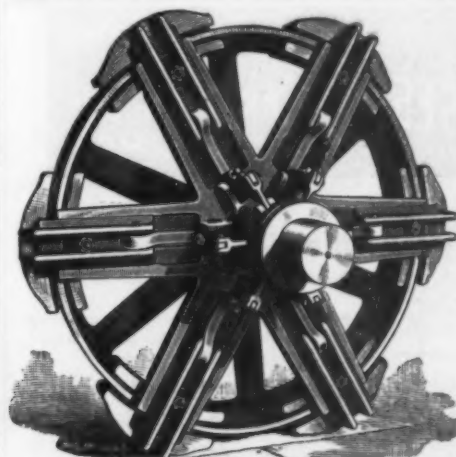
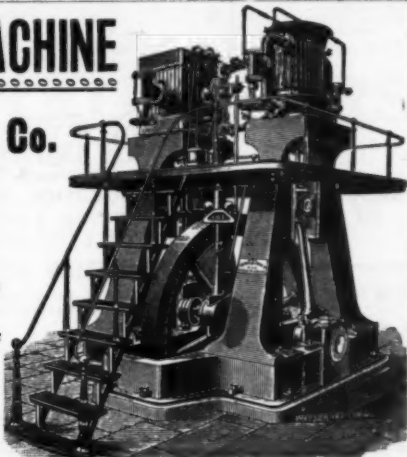
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MACHINES CARRIED IN STOCK
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PROMPTLY EXECUTED.

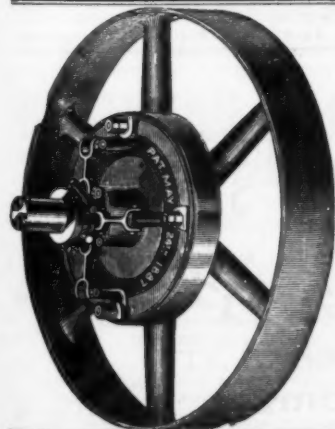
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CLEVELAND, OHIO.**

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Friction Clutches, &c.
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OF ALL DESCRIPTIONS.
HOISTING AND TRANSMISSION SHEAVES.
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Estimates given on Pulleys and Band Wheels to 18 feet in diameter. Send for Catalogue.
TODD PULLEY AND SHAFTING WORKS
EAST ST. LOUIS, ILL.

Advertise in the Manufacturers' Record.

**ECLIPSE FRICTION CLUTCH PULLEYS
AND CUT-OFF COUPLINGS.**

SEATTLE, WASHINGTON TER., 5 25, 1899.

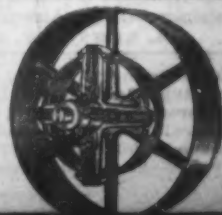
Eclipse Wind Engine Co., Beloit, Wis.
DEAR SIR: The Clutch Pulley (diam. 106 in., face 31 in.) works satisfactorily in every particular, and is a great convenience. We have two, and can stop either the main saws or the range rigger, or both whenever desired, without stopping the engine.

Yours respectfully,
Yeaser Wood, Coal & Lumber Co.,
J. D. Lowman, Sec'y.

ECLIPSE WIND ENGINE CO. - Beloit, Wis.

St. Joseph, Mo., June 24, 1899.

Eclipse Wind Engine Co., Beloit, Wis.
GENTLEMEN: The Clutch Pulley reached us all right; it works to a charm. If we had put it on last April, in place of one we had, we should now be ahead over \$400, which we have lost in time and breakage. Yours,
The Brick & Terra Cotta Mfg. Co.,
F. P. Haasey, Sec'y.





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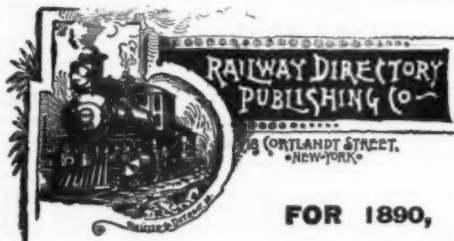
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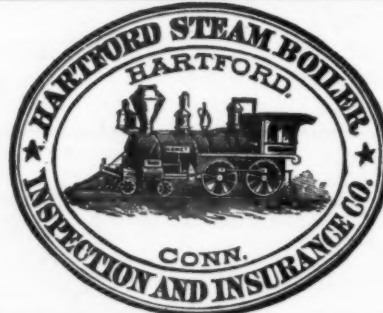
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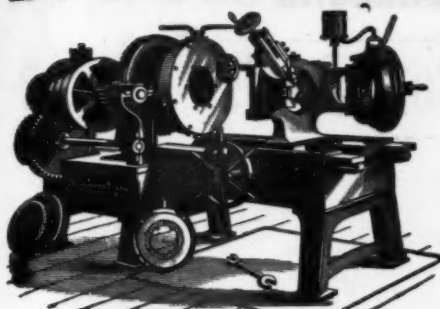
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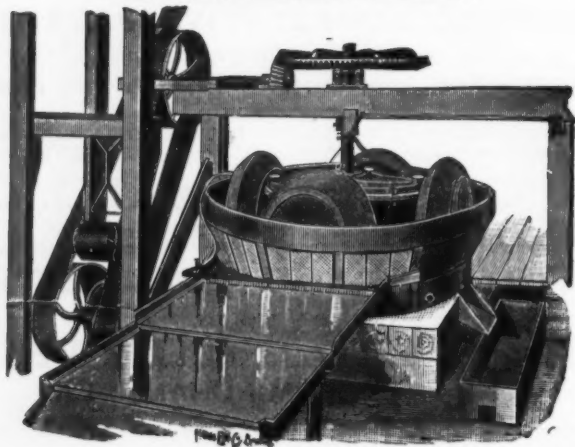
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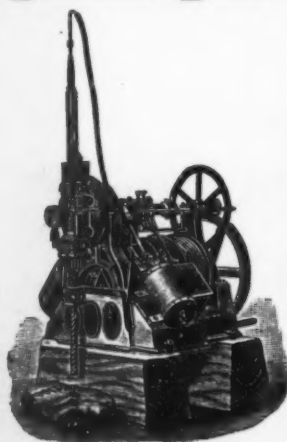
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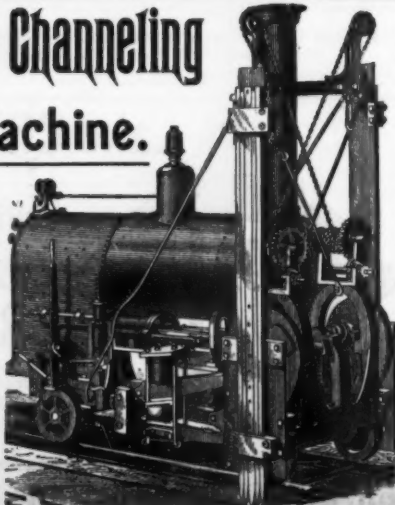
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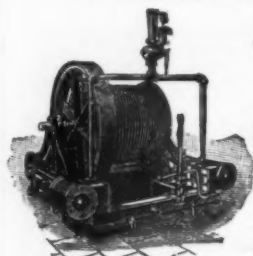
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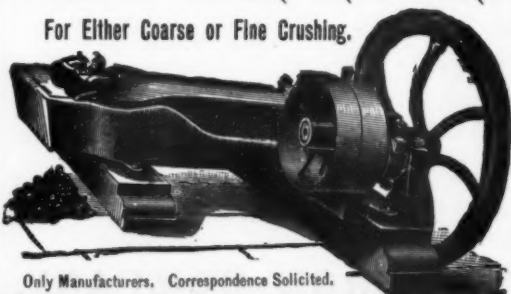
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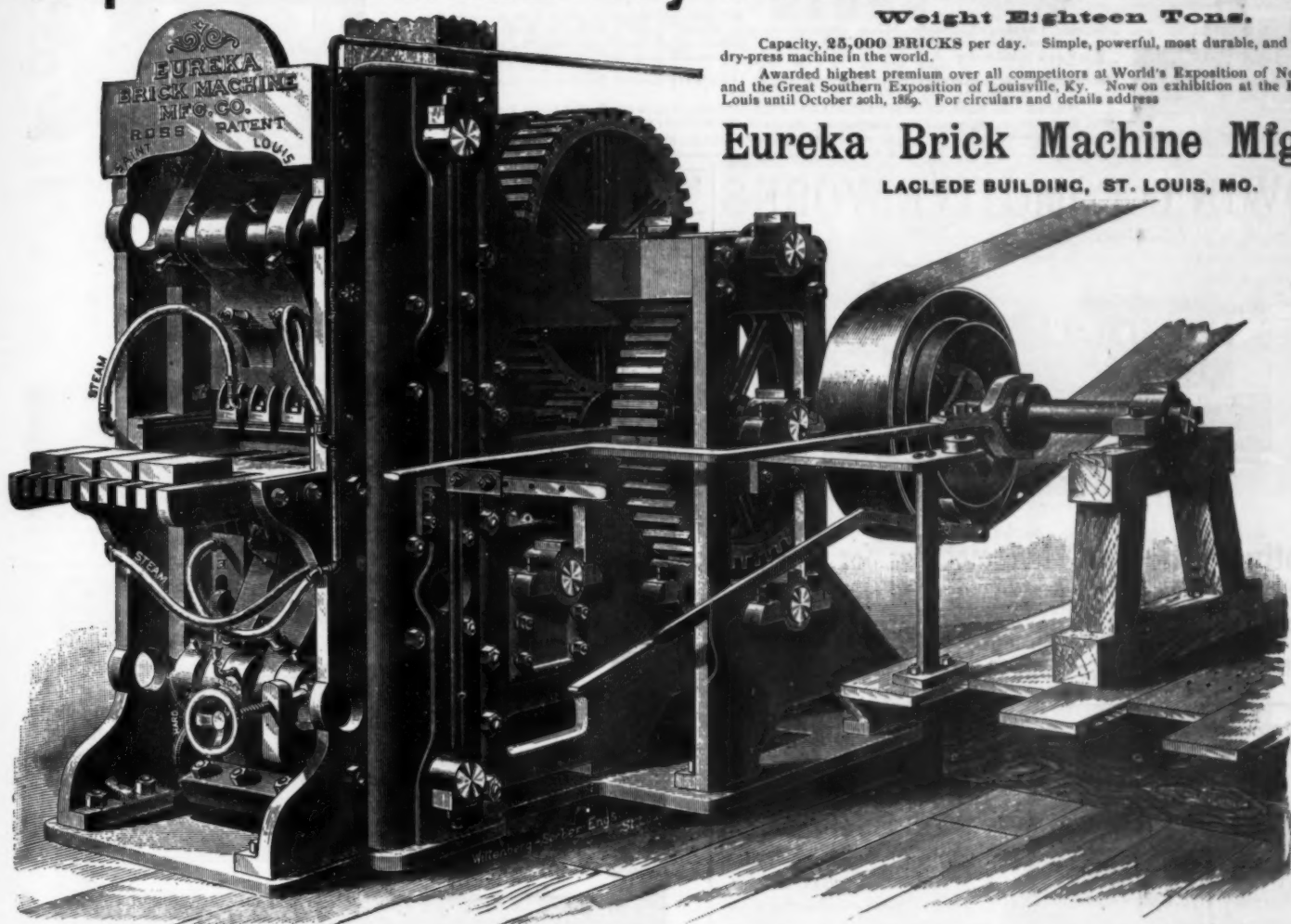
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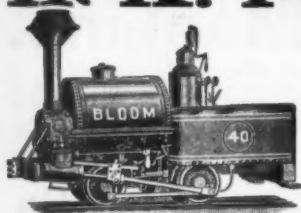
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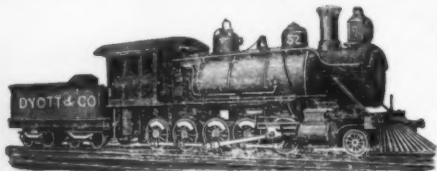
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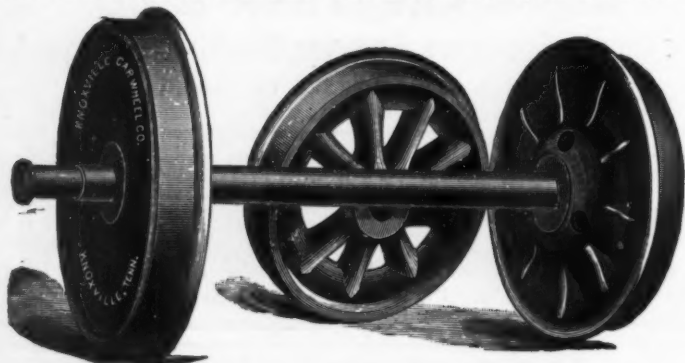
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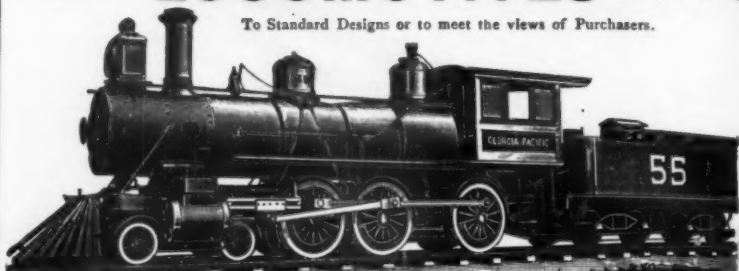
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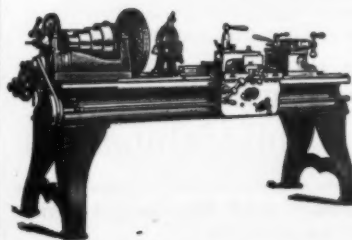
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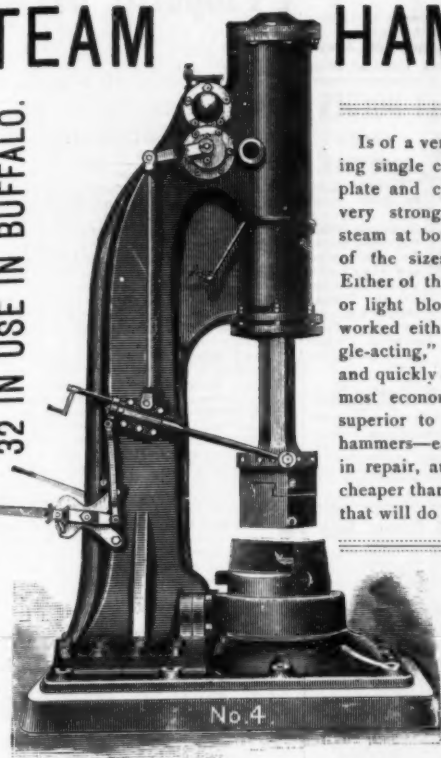
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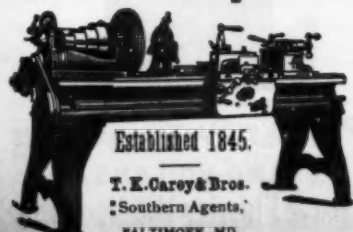
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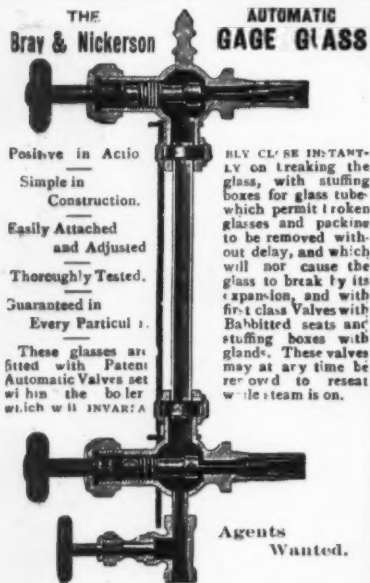
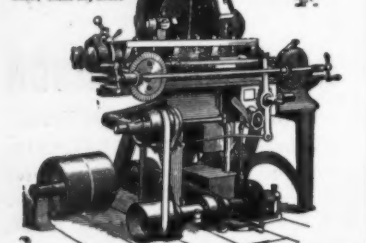
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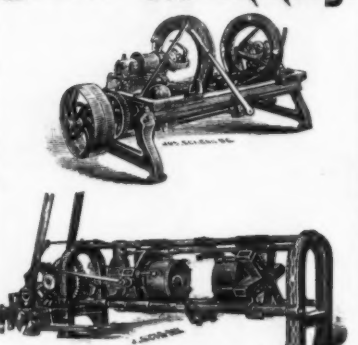
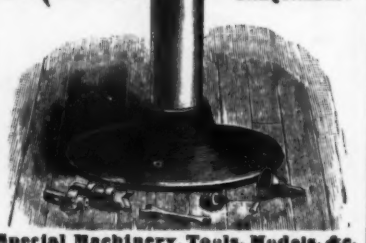
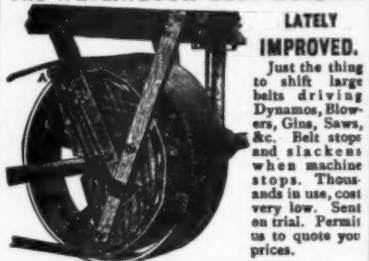
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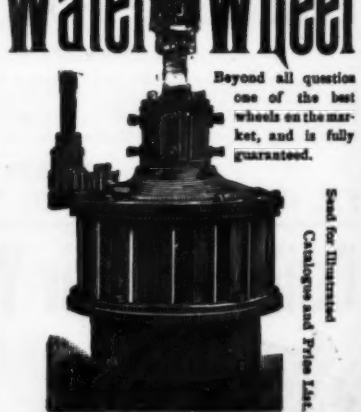
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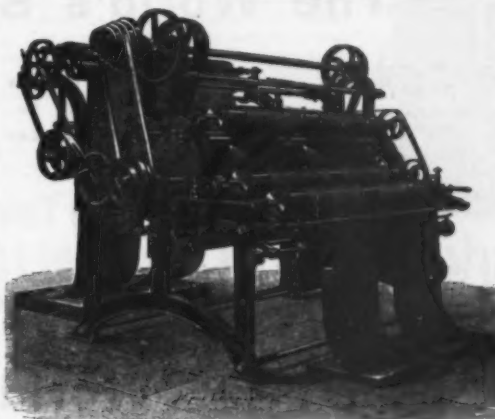
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One of these Patent Raising Machines will do the work of six Card-Raising Machines of any other patentee, or eight Teasle Gigs, and by means of the differential motion raises, WITH ONE AND THE SAME CARD AND WITH EQUAL FACILITY, the

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It is patented all over Europe and in the United States of America, and is now in use for raising:

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The Machine takes very little power, a 3-inch strap will drive it under any circumstances. As everything on it is self-acting, it does not require an experienced man to work it.

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Yours truly, LEWIS & BRYCE.

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GENTLEMEN: We have been using your Magnolia Anti-Friction Metal in all departments of our mills since its introduction by you, and we cheerfully testify to its superiority over any other metal we

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GENTS: We have used your Metal in many bearings, running at a very high speed, and it has in every case given the best of satisfaction, and invite you to call and figure for yourselves the high speed attained.
Respectfully, J. W. OSTRANDER.

CHICAGO OFFICE, CHICAGO, November 15, 1889.
THE MAGNOLIA ANTI-FRICTION METAL CO., New York City.
GENTLEMEN: As you desire, have called upon Mr. Ostrander and made a careful computation of the speed of machine with him; the wonderful speed of 23,466 revolutions per minute is the accurate figured result. Mr. Ostrander informs us that he has often speeded this machine up to 28,000 revolutions per minute; also that he will cheerfully prove these facts and figures to any interested, intelligent person calling to see test practically illustrated.

1st Pulley, 18 in. diameter,	110 revolutions per minute, belted to the
2d " 8 in. "	attached on the same shaft to the
3d " 20 in. "	belted to the
4th " 3 in. "	attached on the same shaft to the
5th " 8 in. "	belted to the
6th " 3 in. "	attached on the same shaft to the
7th " 8 in. "	to the final 8th pulley, 1 1/2 in. diameter.
8th " 1 1/2 in. "	

THE SPEED FIGURES OUT AS FOLLOWS:

Divide 18 in. Pulley by 8 in.—2 1/4 times, multiplied by 110—247 1/2 revolutions per minute—825 inches Rubbing Surface per minute.
Divide 20 in. Pulley by 3 in.—6 2/3 times, multiplied by 247 1/2—1,650 revolutions per minute—5,500 inches Rubbing Surface per minute.
Divide 8 in. Pulley by 3 in.—2 2/3 times, multiplied by 1,650—4,400 revolutions per minute—14,667 inches Rubbing Surface per minute.
Divide 8 in. Pulley by 1 1/2—5 1/2 times, multiplied by 4,400—23,466 revolutions per minute—78,219 inches Rubbing Surface per minute.

INCHES R. S. PER 10 HOURS' RUN.
10 hours' run, 60 minutes each—600 X 78,219—46,931,400

The above figures are somewhat greater at times when the diameter of the first pulley is larger or the first pulley's speed is increased. It has frequently been speeded to 28,000 revolutions per minute when necessary.

The belting used on this Routing Machine is made of the best quality of endless rawhide belting. Appended below, second short method, with rule, for the above figures of speed.

Multiply the diameter of the driver by the speed of the shaft it is on and divide by the diameter of the pulley driven; this will give the speed of the second shaft, and continue until calculation is finished.

1st Pulley 18 in. diameter by 1st speed—110—1,980 inches.
Divide the 1,980 inches by 8 in. pulley—247 1/2 revolutions per minute—825 inches Rubbing Surface per minute.

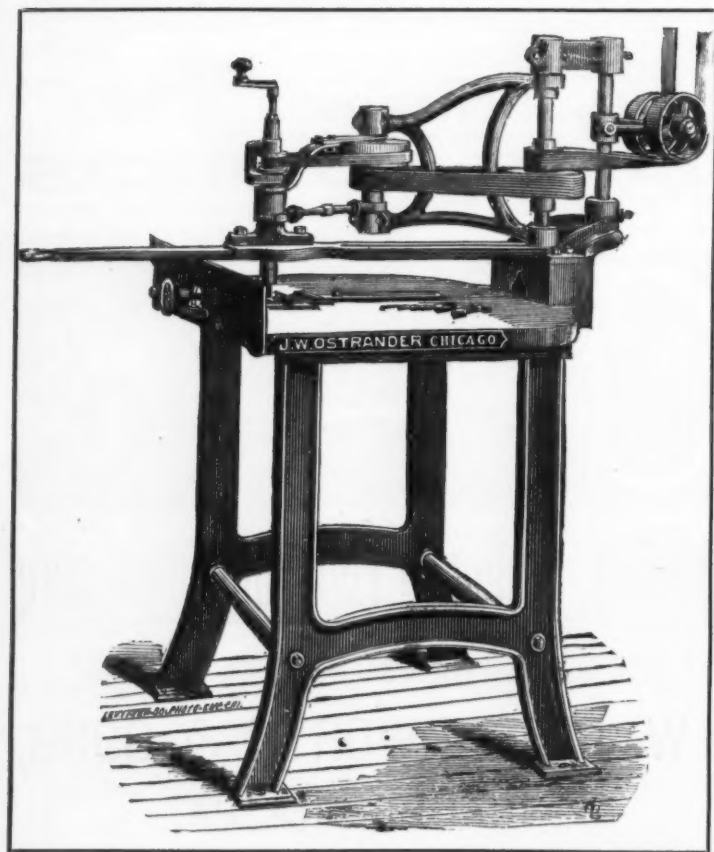
Multiply the 247 1/2 revolutions by 20 in. pulley—4,950 inches.
Divide the 4,950 inches by 3 in. pulley—1,650 revolutions per minute—5,500 inches Rubbing Surface per minute.

Multiply the 1,650 revolutions by 8 in. pulley—13,200 inches.
Divide the 13,200 inches by 3 in. pulley—4,400 revolutions per minute—14,667 inches Rubbing Surface per minute.

Multiply the 4,400 revolutions by 8 in. pulley—35,200 inches.
Divide the 35,200 by the last pulley diameter, 1 1/2 in.—23,466 revolutions per minute—78,219 inches Rubbing Surface per Minute.

INCHES R. S. PER 10 HOURS' RUN.
10 hours' run, 60 minutes each—600 X 78,219—46,931,400

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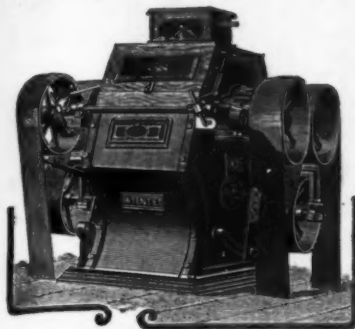
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Thanking you for the prompt and efficient manner in which you furnished my machinery in so short a time, after so great a loss and damage by fire burning your works, and with the best of wishes I remain,

Yours respectfully,

PETER SNYDER.

For full particulars regarding the best FLOUR OR CORN MILL MACHINERY, address



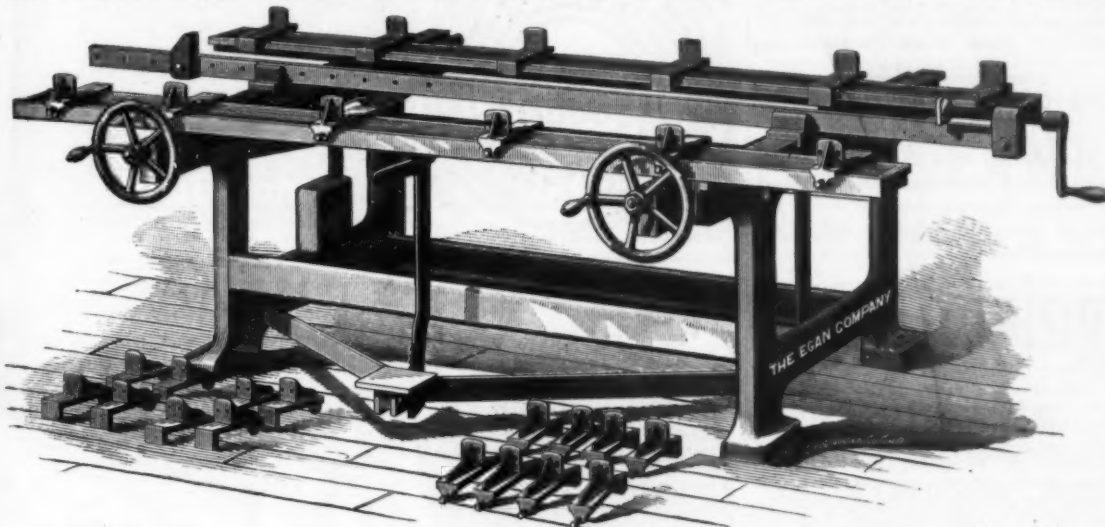
THE CASE MANUFACTURING CO., Columbus, Ohio.

New Door and Blind Clamp.

We illustrate a late improvement in the way of a door and blind clamp, manufactured by The Egan Co. This clamp will be found to possess many points of advantage to commend it. All the necessary adjustments and dogs are supplied for clamping any size of door or blind, and an equal pressure given on all the joints, and making a perfectly tight joint on all sides. The frame is made of iron, planed perfectly true, and, when bolted together, makes a very solid machine, with ample floor space, and is capable of standing any amount of strain when clamping the heaviest doors. The top of the frame is planed true to receive two long slides for

the dogs to slide on; they can be placed in any position to suit the work.

A long bar, with clamping screw attached, is provided for clamping the ends, and suitable arrangements devised for operating the slides for different widths of



NEW DOOR AND BLIND CLAMP.

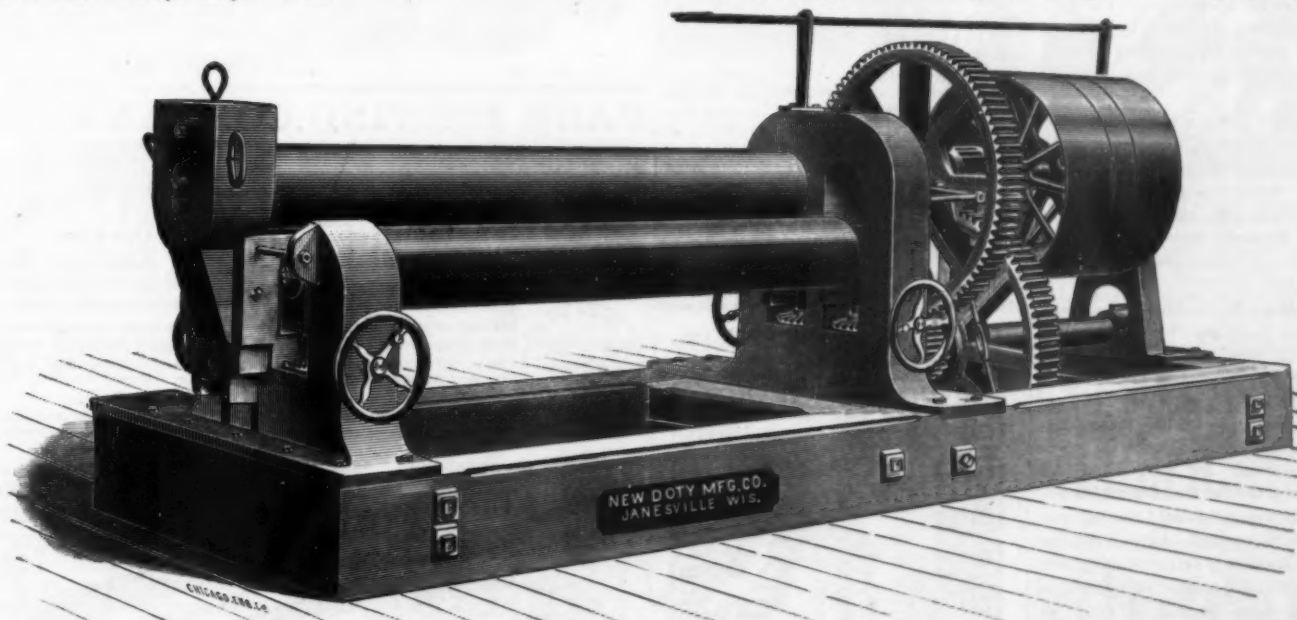
doors; the treadle is then forced down, which gives a uniform pressure on all sides of the door or blind at one operation. By releasing the treadle the clamp is forced open, ready for another door or blind.

doors; the treadle is then forced down, which gives a uniform pressure on all sides of the door or blind at one operation. By releasing the treadle the clamp is forced open, ready for another door or blind.

Belt Power Bending Rolls.

In the machine herewith illustrated, which is built by the New Doty Manufacturing Co., of Janesville, Wis., and is intended for bending boiler and other plate,

between two upright pieces on the main casting, which pieces hold the hinge in place and resist all side strain. The top roll is held in position, when the hinged housing is dropped, by a strap which passes over the end of the roll next to the gears and is tightened by a turnbuckle on each side. The two pinching rolls are geared together, and so arranged that after making one-half of a revolution they are automatically disengaged and the lower one then revolves by friction only, this being an advantage for the reason that it relieves the gears of what would otherwise be the most severe strain they would be subjected to. This strain is caused by the fact that one roll coming in contact with the outside or convex side of the sheet, while the other is in contact with the concave side, there must be some slipping if the rolls are geared together and revolve at the same speed. By releasing the lower roll before the bending commences, this strain is entirely obviated and much wear and breakage of gears avoided. The rolls can be connected at any time by a clutch, but are thrown out again after half a revolution. In all machines having rolls above six inches in diameter the rolls are raised and lowered by a screw worked by bevel gears driven by hand wheels on outside of housings, as shown in cut. Rolls of six inches diameter or less are raised and lowered by a screw worked by hand wheels placed beneath the bearings. The pulleys are arranged with the tight pulley in the mid-



BELT POWER BENDING ROLLS.

feetly true, and, when bolted together, makes a very solid machine, with ample floor space, and is capable of standing any amount of strain when clamping the heaviest doors. The top of the frame is planed true to receive two long slides for

It will take in doors or blinds from 6 inches to 4 feet 3 inches wide, and from 6 inches up to 8 feet 8 inches in length. Further particulars will be furnished by the manufacturers, 225 to 245 W. Front street, Cincinnati, O.

made strong enough for the heaviest work. The housing on one end is hinged, so as to drop down out of the way and allow the removal of the sheet after it is bent to a circle. This hinged housing, when in an upright position ready for work, sets in

dle and loose pulleys on each side, then with an open and crossed belt the rolls can be run either way.

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The Markets.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, December 24, 1889.

While the volume of business in iron and steel has declined a little, interest in the probable future course of the trade has increased, and was never at a higher pitch than at present. The course of iron prices for the next three months is the subject of much thought and discussion. So far as the Eastern users of crude iron are concerned, they have already answered the question by making heavy purchases of forge on a basis of \$17.50, delivered during the first three months of the year. They think they have done wisely in this and now feel safe against fluctuations. Among the transactions recently closed are four or five large sales of Southern iron, the prices being reported to be \$17.50 delivered for forge. At present quotations in Birmingham and Chattanooga these are the bottom prices at which Alabama iron can be delivered at Northern points. Freight rates have been fixed for the winter, and there is no element of uncertainty to be considered. So far as consumption is concerned, large users of iron feel that there will be a steady increase for months, and perhaps for a year to come; makers feel that they run no risk in entering upon long contracts; but the bulk of the business done so far has been in forge irons. Users of foundry irons are going a little slower; orders for No. 1 are placed at \$19 to \$19.50, but no very good No. 1 can be had at less than \$20; stove molders are obliged to pay \$18.50 to \$19. It is probable that if the Southern iron makers desire it, they can secure a good deal more business in Northern markets than they have obtained during the past six months.

Reports from all Western centers show a most gratifying condition of trade and prices. In Chicago a further speculative advance has taken place, particularly in Lake Superior charcoal and Bessemer irons. Very large blocks have been purchased, and brokers are instructed by their principals to pick up Bessemer irons at the best prices they can.

In the Ohio Valley market a more conservative feeling prevails, but a great deal of inquiry is being quietly made, both for forge and foundry irons. Southern iron makers are receiving all the encouragement and business they desire. The railroads are promising more cars by January, and the iron makers are therefore promising deliveries which have been delayed for some weeks.

In the finished iron trade there is less to say. Bar iron is selling at 1.75 to 2 cents according to quality of material and location of mill. Muck bars are quiet at \$30.50 east of the mountains, and \$31 to \$32 at Pittsburgh. Bessemer iron is selling there at \$24 to \$25. All the wrought iron pipe mills throughout the country are sold up, and there seems to be business enough coming along to secure them in uninterrupted activity until spring. Wire rods are very high and active in all markets. A fair business is being done in merchant steel, and in the hardware line there is unusual activity, especially through the West. Cincinnati markets are very active for manufactured iron, nails and old material. Detroit markets are active for Lake Superior charcoal. At Cleveland, the demand for ore continues, and it is evident that users of Bessemer and non-Bessemer ores intend to make ample provision for at least six months' requirements.

The Eastern ship-yards and the Western car works will, we are informed, be in the market during January. The plate iron makers claim to have inquiries for very unusually large blocks of plates.

The makers of steel rails are not doing very much business, but everything points

to an influx of orders during January, not only for the construction of new roads, but for repairing purposes. Quotations on small lots have been advanced in Eastern Pennsylvania to \$36 to \$37; latest quotations from Chicago, \$38 for small lots. Sales so far, for delivery next year, foot up 760,000 tons, according to latest advices. The Board of Control announces shipments for the first 11 months of this year to have been 1,116,017 tons. The output for the year will not be far from 1,500,000 tons.

Steel blooms and billets are very strong, but the oversold condition of the mills prevents new business. The demand for soft steel is crowding producers, and many new furnaces are building. It is quite probable that the capacity for steel making will be increased more during the coming 12 months than during any year in the past.

The nail trade is very active throughout the country; prices have been gradually creeping up, and quotations in the East are now \$2.20 for iron and \$2.40 for steel, although on very large lots these prices may be shaded a little. In Western markets, quotations are \$2.35 for cut steel nails at factory, and \$2.60 at store. A further advance will take place in January. Wire nails are \$3 at Chicago in large lots; in small lots \$3.15. These quotations are also destined to move up a notch or two.

The Cost of English Bessemer Pig.

The Iron and Steel Trades Journal has published the following estimates of cost of making Bessemer pig iron before the rise in raw materials and at the present time:

	£	s.	d.	¢
36 cwt. ore (at 19s.)	1	14	1 (12s.)	1 1 8
21 cwt. coke (at 28s.)	1	9	5 (18s.)	0 18 11
Limestone	0	3	6	0 2 6
Wages, salaries, charges, supplies and repairs	0	8	0	0 6 0
Totals	3	15	1	2 9 1

The same authority adds: "These figures may be criticized, but they approximate pretty nearly to what the actual cost must be, supposing that fuel and ores are purchased at the market prices ruling today. These figures seem to show that were it not that iron smelters are receiving materials, &c., under contracts effected at lower rates than those now ruling, they would hardly be able to make iron at the 'high prices' at which it is now selling, and if fuel and ore are to remain at their present prices pig iron must of necessity be worth money. The figures quoted apply specially to hematite iron, but if a comparison of costs and selling prices 'now' and 'then' were made in other iron producing districts, a somewhat similar state of affairs would be manifest. The advance in iron is principally appropriated by the iron and coal mine owners, the coke manufacturers and the men employed in the mining and smelting; and it seems that at present neither the iron smelters nor the iron and steel manufacturers have participated properly in the improvement in value."

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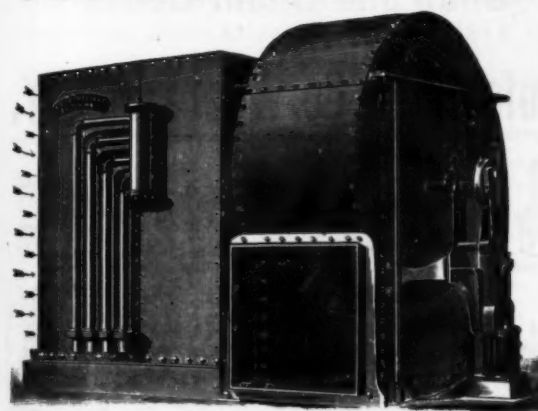
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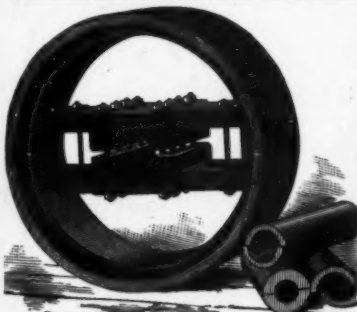
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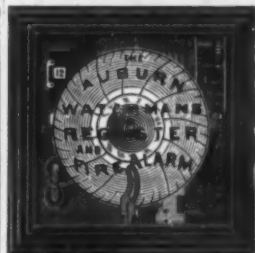
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7x2 1	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
8x2 1 1/4	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
8x3 1 1/4	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
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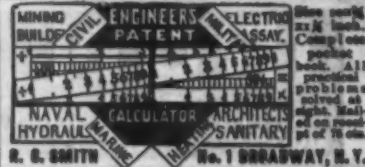
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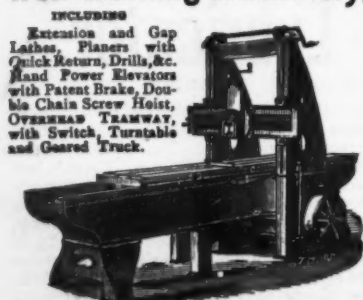
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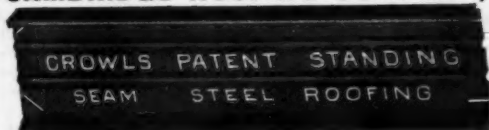
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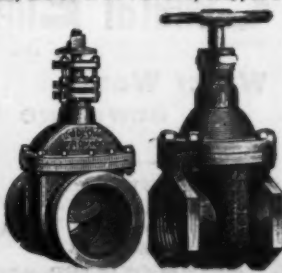
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**A. L. HAYMOND, General Agent,
Huntington Town Co., Huntington, Ark.**

Eastern Lumber Markets.

[Spec. corresp'dence MANUFACTURERS' RECORD.]
NEW YORK, December 23, 1889.

It is only when we compare the year's business with the business of last year that we can form an approximately correct conception of the progress made by Southern lumber in competition with Northern. The effect is particularly noticeable in all our Atlantic coast markets from Boston even to Baltimore. Our energetic Salesmen have introduced Southern woods through established agencies in no less than three hundred towns between those points. As we go back from the coast, the business falls off until a line is reached where Western mill products hold control of the trade, excepting for certain fine grades of work. This line will be removed year by year further inland by reason of the increasing car shipments from Southern mills, how rapidly, depends on many circumstances and agencies yet to show themselves. The fall business in pine, both white and yellow, has been up to expectations. Albany, Buffalo, Tonawanda, all have done a booming white pine business, but the bulk of it has been in the interior. The old arguments against yellow pine answer no longer, from being experimentally tried for flooring and ceiling. It has been successfully introduced for posts, scantling and board. Our leading Southern pine men have decided to pit yellow against white in white pine centers, and have arranged with certain Chicago parties to co-operate with them in bearding the white pine lion in his Chicago den. Last year far-seeing lumbermen saw the drift of things and put up mills at certain very eligible points, as regards rail shipments especially, and they have now a stock of drying lumber awaiting buyers. The co-operation of railway managers has been asked, and as soon as they can see their way, reduced rates will be made. The hemlock and white pine people are not asleep and know they have a new enemy to meet, grown strong by exercise. The attention of architects and builders has been more carefully directed to Southern pine and hardwoods, and the foundation for a great and ever-extending demand has been laid among them. The future of white pine in the Northern States is largely a question of railroad freight rates.

It is proper to call special attention to these facts in this the closing review of the year, and to add a few pertinent comments. Michigan and Wisconsin mill owners had already crowded lumber prices as low as possible before Southern pine had gained its strong foothold. At this time it is as low as legitimate business competition allows. In a certain sense the white pine people have played their last card, are in the last ditch, and must simply stand still and take what comes. But it must be remembered they have the timber, the cheap water transportation via the lakes, to a dozen States, while the yellow pine people have long rail routes, and all the contingencies of an uncertain supply of cars and the possibility of fluctuating freight rates, which will be made to fluctuate towards the highest figure, the traffic will bear, according to the usual custom of railway men.

To say that business for December is good is saying what everybody knows. If the theories now entertained regarding the future of prices are adhered to, business will be dull in white pine during the winter for the reason that stocks in primary markets are large, and there will be a big log cut this winter. Then the talk of a strike next year causes some uneasiness in building circles. The Federation of Labor has resolved on an effort in that direction, and when the fire-brand of eight hours is tossed into the inflammable material of discontented labor, there is no tell-

ing what harm it may do. The possibility of a general compliance with the demand is very remote. Random orders for yellow pine are \$21.50; yard sales \$22.50; heart-faced boards \$20.50; sidings \$13.50; flooring \$20.50 to \$21.50; stepping \$26 to \$28; export lumber \$12.50 to \$14.50; for Spanish posts from Gulf ports, \$12.50 f. o. b.

A good business is being done in North Carolina pine at \$21 for No. 1 one-inch stock, and \$22 for No. 1 one-inch flooring; for one-inch ceiling, No. 1, \$24 is paid, and for one-inch stock, 10 to 12 inches, \$24.

If there is not much poplar here there is an abundance to call on. Prices are firm and buyers are willing to pay asking prices. There is some possibility of a scarcity in hardwoods if the winter should continue open and muddy. Cherry is selling slowly. The demand for birch has increased the supply in other markets, and buyers here are careful not to load up.

Extensive building throughout the country seems to be exerting a perceptible influence on quartered oak. Everybody wants oak who can possibly afford it. The walnut trade has fallen off in North-eastern markets, except for sellers who are willing to tempt buyers at low prices, but a spurt is liable at any time.

We are keeping a sharp eye on new enterprises. The architects think there will be no cessation in building. Railroad builders talk encouragingly. The manufacturers in all lines expect to enlarge their plants. Business will be better next year if the iron trade is any sign.

As soon as the opportunity offers producers will start in to accumulate stocks. This may possibly be the first rivulet that in a year or two may develop into a commercial depression. The high prices and steady demand now on is due in great measure to the fact that there are no stocks, and that demand has surely overtaken capacity.

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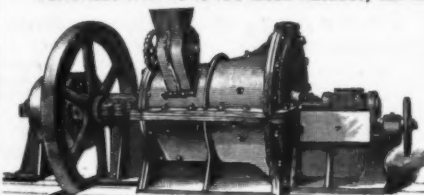
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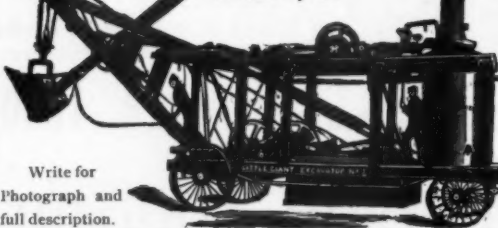


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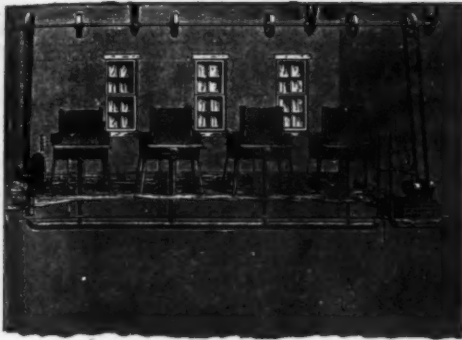
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[SECTION OF PLANT OF FIFTY FIRES PUT IN FOR THE LAMSON & SESSIONS CO., CLEVELAND, OHIO.]

THE SYSTEM adopted by this company for the use of Crude Petroleum as fuel is both simple, economical and effective. Perfect combustion, uniform heat, regulated as easily as an ordinary lamp. Although comparatively new, being only introduced in April of this year, the number of fires using it AMOUNT TO NEAR ONE THOUSAND, WHICH IS PROBABLY MORE THAN ALL THE OTHER DEVICES FOR THIS PURPOSE COMBINED.

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This Burner is particularly adapted to the heavy work done by axe and scythe makers, large drop forging, etc., as well as the innumerable lighter manufactures.

We have in actual use fires from 6 x 8 inches for sure work, up to 5 x 24 feet for heating Blooms, where we heat 60 gross tons per day.

In fact it can be applied to any purpose where heat is required, obtained from coal or gas. We save in fuel, labor, time, quality of work, health of operatives, cleanliness; also in the durability of belting, which is rapidly destroyed by the fumes of gas produced by anthracite coal.

We have at this office a number of testimonials from large concerns, setting forth the merits as claimed, which are open to inspection, or a circular will be furnished on application. For further information apply at the offices of the company, Ft. Plain, N.Y.

OFFICE OF LAKE ERIE IRON CO.,
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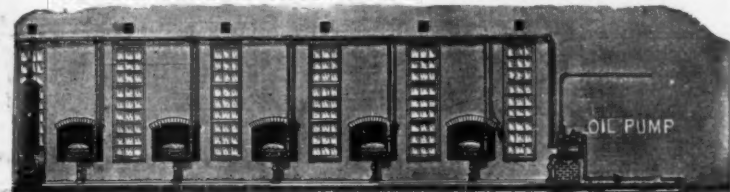
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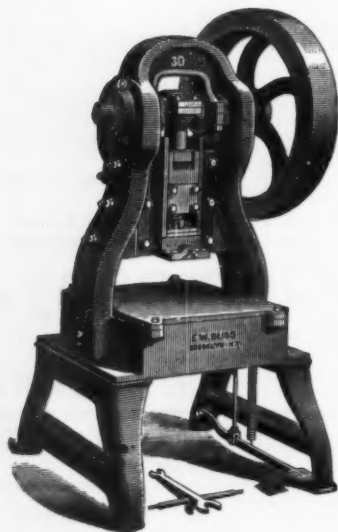
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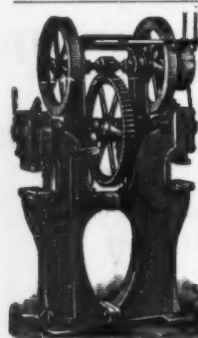
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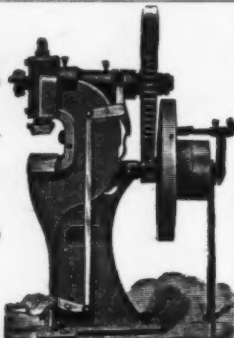
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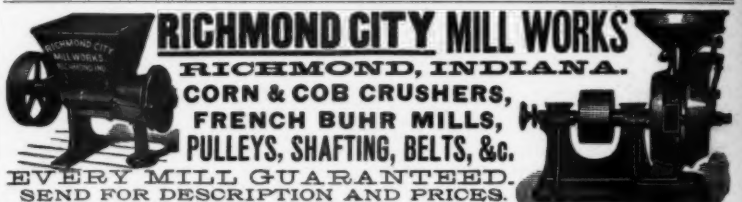
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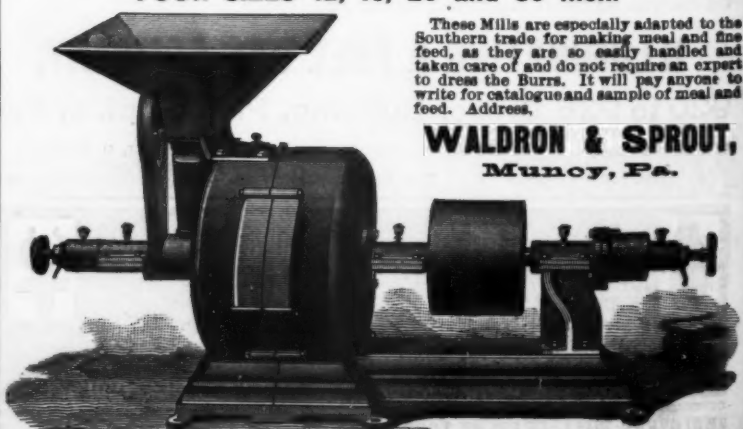
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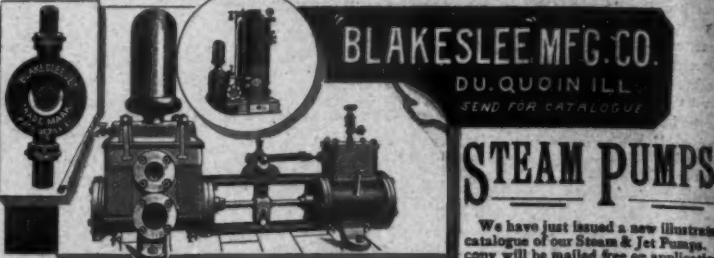
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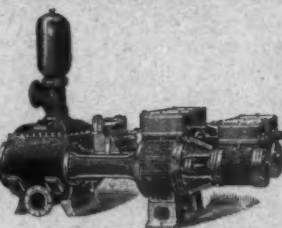


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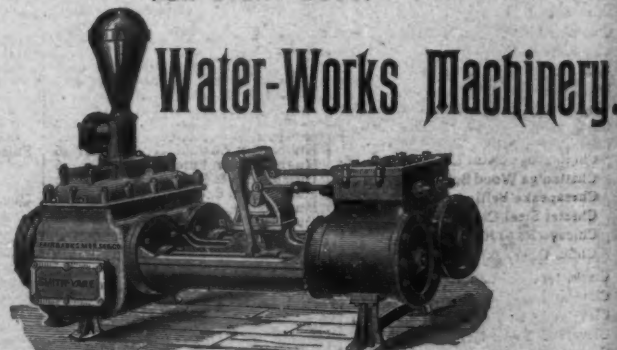
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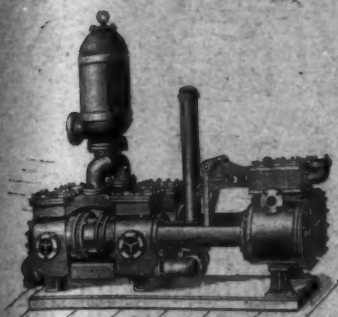
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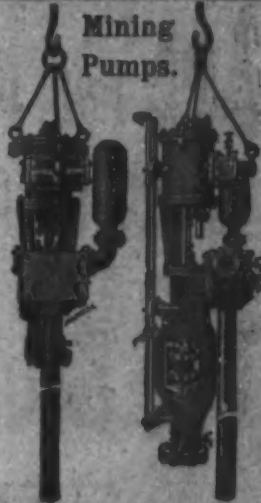
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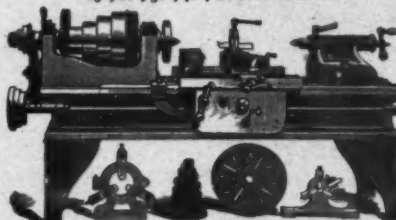
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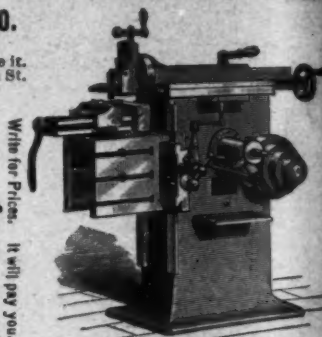
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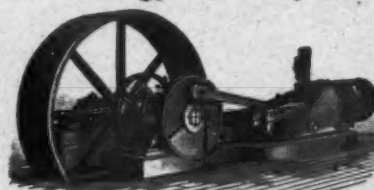
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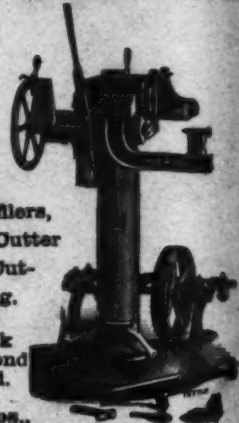
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